

THE DOCK & HARBOUR AUTHORITY

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Editorial

The Port of Constanza, Roumania.

The Port of Constanza, which is the principal port of Roumania, was described by Mr. Roy S. MacElwee in *The Dock and Harbour Authority* for April, 1928, but much of the contemplated improvements at that time have since been entirely altered and for that reason the Port of Constanza again appears as the Supplement for this month's issue.

The development scheme contemplated in 1928 provided for several new jetties running from north to south, but in the revised development scheme, as shown in the present Supplement, it has been decided to construct these jetties running from west to east, which allows of sufficient room for a turning basin of 650 metres in width.

The principal developments that have been completed since 1928 are:—In the North or Inner Basin—a reinforced concrete shed for general cargo has been built; a maritime station has been constructed; additional shed accommodation has been provided and a new grain-drying installation laid down. The South or Outer Basin has been developed by the construction of a central jetty which divides it into two docks, one for oil tankers and one for general service.

The traffic at the Port of Constanza has developed to a considerable extent since 1928 and although imports have shown a considerable decrease, exports on the other hand have increased to nearly three times the 1928 figure. In 1928, 2,486,000 n.r.t. of shipping entered and in 1933 this figure had risen to 4,924,000 n.r.t. Imports in 1928 were 130,000 tons, but in 1933 they had decreased to 85,000 tons. Exports for 1920 were 2,050,000 tons and in 1933, 5,704,000 tons.

Coal Export Trade at Humber Ports.

The fact that the export trade in coal at the Humber ports fails to expand and that the shipping facilities and appliances provided at the docks are not being used to more than one-third of capacity, is giving rise to serious anxiety among coal exporters in particular. While much of the decline in exports in the past two or three years is due to the very drastic import restrictions of various countries, formerly the best customers for Yorkshire coal, and the competition of Continental rivals, it is not wholly so, but is in part attributable to the operation of the Coal Mines Act, under which production and prices are regulated. Humber exporters are making strong representations to the Committee of Investigation for the Midland area that they could sell more coal abroad if there were adequate and suitable supplies available, and proposals have been put forward for the formation of an export pool to provide a reasonable surplus or margin to meet the current requirements of the foreign and bunker trade. Exports of coal have of late been practically stationary. The total from the Humber ports to the end of May was 1,360,677 tons, against 1,351,040 tons in the corresponding five months of last year. This does not, however, include bunker and coastwise shipments, which together are responsible for a similar or slightly larger total. Last year the aggregate shipments (exports, bunkers and coastwise) from the Humber ports were 7,469,722 tons, of which approximately three million tons were bunkers on vessels engaged in the deep-sea trade and fishing. The exports (foreign) only amounted to 3,281,131 tons, as compared with 3,254,200 tons in 1933 and 6,187,198 tons in 1930.

The Tyne Improvement Commission.

The attitude of the Tyne Improvement Commission to the proposal for the unification of Tyneside local government, regarding which a Royal Commission of inquiry has been appointed, was defined at the May

meeting of the authority. The unification proposal was recently considered by the Tyne Commissioners Parliamentary Committee. It had also before it an extract from Captain Euan Wallace's report to the Government on conditions in the North-East. This stated: "The amalgamation of the riparian authorities might be found to provide an opportunity for reviewing the present ownership of the various public docks and quays. The Tyne Commission exercises jurisdiction over the waterway for nineteen miles inland from the seaward ends of the Tyne piers, and owns two docks—Albert Edward and Northumberland. Tyne Dock is owned by the London and North-Eastern Railway Company, and four of the eleven public quays are owned by Newcastle and one by Gateshead, and two each by South Shields, Tynemouth, and Wallsend. It is at least worth considering whether the interests of Tyneside would not be better served by the transference of all these undertakings to a single port authority." The Parliamentary Committee recommended the Board to offer to provide the Royal Commission with such particulars of the operations of the Tyne Commission as the Royal Commission may require.

The Chairman of the Tyne Commission, Mr. H. P. Everett, at the May meeting, said it was felt by the Parliamentary Committee that the Commissioners should offer to furnish to the Royal Commission particulars of the river authority's operations if the Commission should so desire, but there was no intention to make representations for transfer of any of the public quays in the port from the Corporations to the Commissioners. The suggested course was agreed to.

Bromborough Dock Progress.

Cargo returns of the Bromborough Dock continue to indicate steady progress, and a few weeks ago the total tonnage of cargo dealt with since the opening of the dock passed the million tons mark. An interesting feature of the dock's activities is the development which has taken place in the trade in bulk oils, for which special discharging and storage facilities are installed. Quayside conveyors are also provided for the rapid handling of seed cargoes direct into silos.

In the four years of the dock's activities some 1,700 ocean and coastal vessels have been accommodated in its waters. In addition to the vessels of companies associated with Unilever, Ltd., i.e., the United Africa Co., Ltd., and the Southern Whaling and Sealing Co., Ltd., representative shipping lines whose ocean-going vessels regularly use the dock are Messrs. Alfred Holt and Co. (Blue Funnel Line), Furness, Withy and Co., Atlantic Transport Co., Ltd., American Steamship Lines, Bibby Line, N.Y.K. Line, Elder Dempster Lines, Rotterdam Lloyd and North German Lloyd Lines.

Regular coastal services have been gradually inaugurated, and to-day practically all the principal ports of the United Kingdom are directly connected with the dock. The services are provided by Coast Lines, Ltd., R. Gilchrist and Co., the Belfast Steamship Co., Ltd., the British and Irish Steam Packet Co., Ltd., F. T. Everard and Sons, Ltd., Munroe Bros., J. J. Mack and Sons, Ltd., J. S. Sellers and Co., and J. S. Jones.

The dredging of the entrance from the deep-water channel of the river to the dock has been carried out under contract with the Westminster Dredging Co., the plant used comprising a bucket dredger, two "dumb" barges, floating plant for discharging the barges, and a small tug steamer. One interesting feature of the operations is that the material dredged from the entrance channel and dock, instead of being carried out to sea as is usual, is pumped through pipe lines and deposited in an area to the south of the dock, which was formerly part of the river foreshore.

Port of Constanza

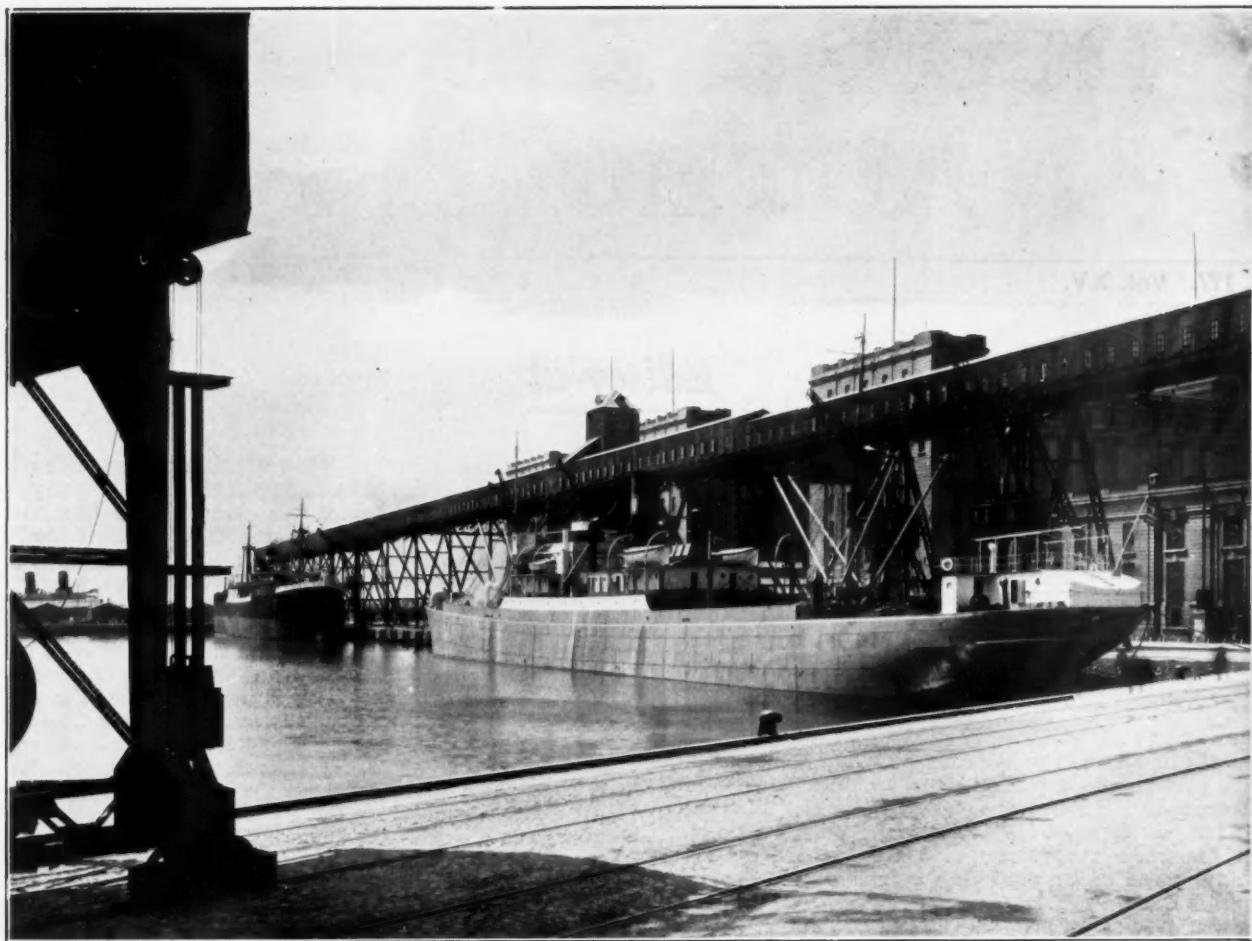


Photo C. Grain Quay, with Loading Conveyor, and Silos beyond.

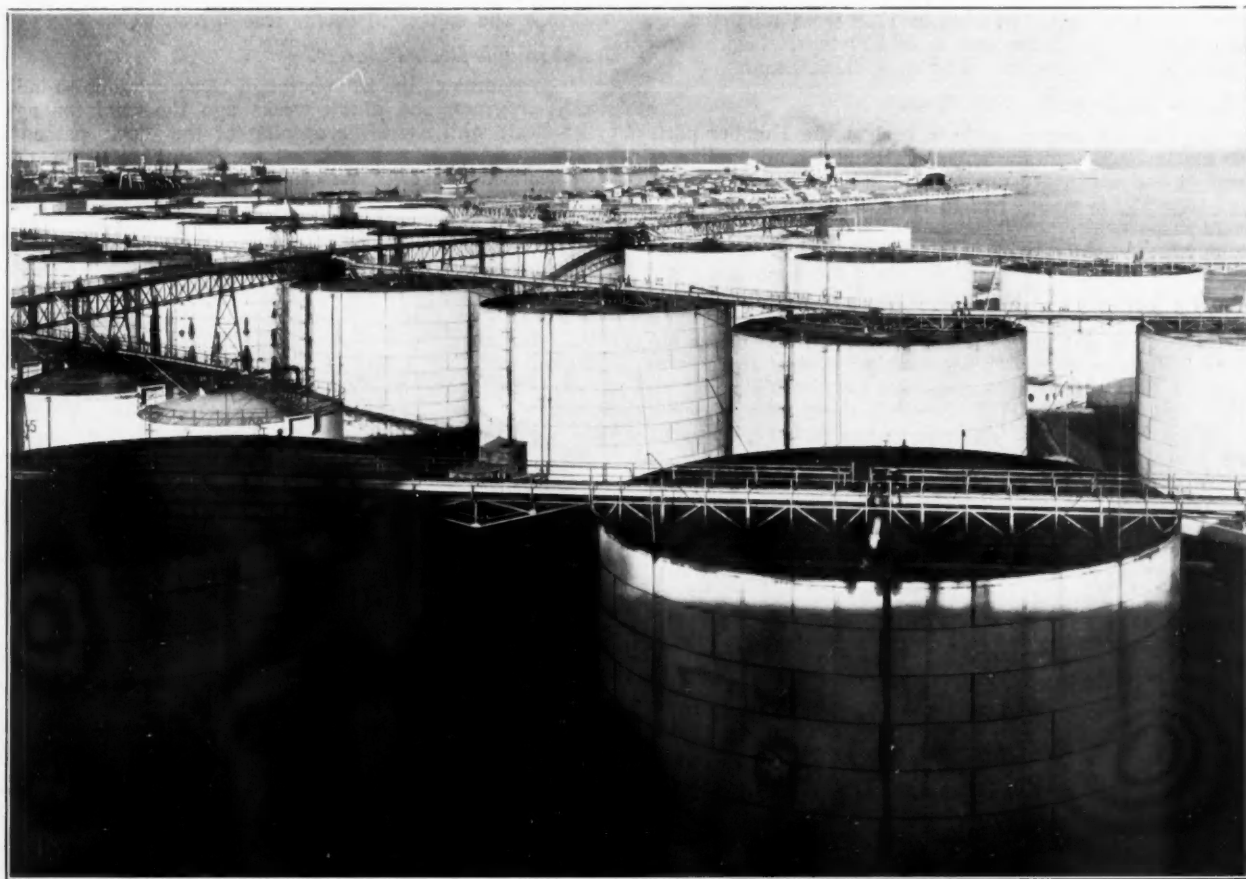
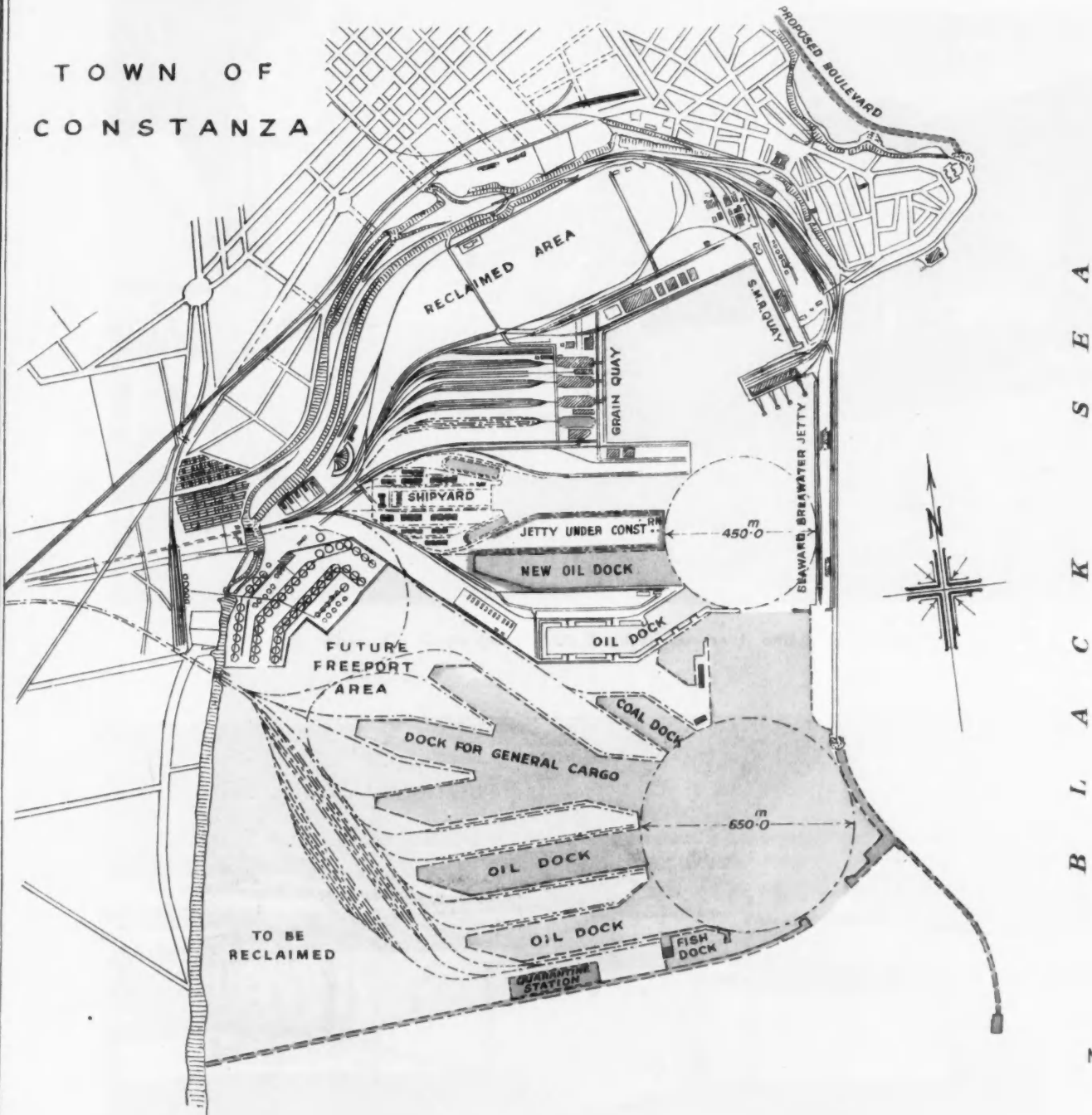


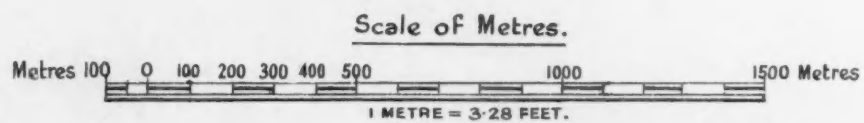
Photo E. Oil Tanks, with Harbour Entrance beyond.

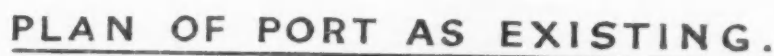
PORT OF CONSTANZA.

UNDER THE JURISDICTION OF THE AUTONOMOUS BOARD OF PORTS & WATERWAYS.



PLAN SHEWING FUTURE DEVELOPMENT.





Scale of Metres.

Metres 100 50 0 100 200 300 400 500 600 700 800 900 1000 Metres.



MARCOURT ST. MARYLEBONE W.

The Port of Constanza

On the Black Sea ; Chief Port of Roumania and only Sea-port of any consequence between Odessa in Russia and Varna in Bulgaria. Distance by rail from Bucharest, the capital, about 150 miles. Population about 70,000. First named Constantina, after the sister of Constantine the Great, its founder. Also called Constanta, Constantza and Kustengi

Introduction

TO many people in this country the Port of Constanza or Kustengi is little more than a name. Yet it is the chief Port of Roumania and virtually the only port on its sea-board, lying to the South of the Danubian delta. There are, it is true, certain other ports on the coast, but so small as to be scarcely worth naming. Their positions

April, 1928, lies in the altogether fresh outline of the contemplated future harbour extension, which is set out for ultimate development. Further comment on these changes will be made later, under the head of "Improvements."

Roumania

Before entering upon a description of the port as it is and as it will be, we may briefly review the state of the country which it



Fig. 1.

are shown on the map (Fig. 1) and their 1933 trade in the table below:—

Port	No. of Vessels	Tons Inward	Tons Outward
Bugaz	100	50	52,774
Constanza	1,737	85,012	5,704,390
Mangalia	8	239	—
Cavarna	10	—	4,195
Balcic	6	—	6,887

But from this it will be seen that the smallest of them, Mangalia, though gravely included in the official returns, has 1/24,000th of the trade of Constanza, when measured in terms of goods-tonnage, including coastal trade.

On the same map, however, may be seen inland river ports of greater importance. These are, in order of ascent up the Danube and reckoning distance from its Sulina mouth:—Galatz, 97 miles up; Braila, 106 miles, and Giurgiu, 308 miles up river. Vessels of 22-ft. draft and 4,000 tons register can navigate as far as Braila.

These ports, as well as Constanza, were fully described in our columns about seven years ago (*). Now, with only so much repetition as is needful for comparison, the present article brings up to date and amplifies the information concerning Constanza, where 70 per cent. of the whole maritime trade of the country is handled.

Some of the improvements projected in 1928 have been carried out in the meantime, other changes have been made on lines differing from what was then intended. The principal difference, however, that appears in a comparison of the plan we now publish as a supplement with that in our supplement of

serves. Roumania, after widespread devastation during the war, when it was ravaged by Russian and German armies in turn, was more than doubled in area on the conclusion of peace, by the inclusion of the territories of Transylvania and Bessarabia. It comprises the whole area lying between the River Dniester and the lower Danube, the older Roumania in the South being an immense alluvial plain, which has been for centuries one of the chief grain-producing countries of Europe. The aftermath of the war, with its financial and economic disturbances, has been felt in Roumania as much as anywhere, but recovery has been fostered by the rapid expansion in the oil industry.

The ports come under the jurisdiction of the Public Works Department, with headquarters in Bucharest, but by legislation of 1929 (since the date of our former articles) their administration is especially entrusted to a "Régie Autonome," or Independent Board, of Ports and Waterways. The sea-ports in particular are administered by the "S.P.M." or "Service des Ports Maritimes." This is not to be confounded with the "S.M.R." or "Service Maritime Roumain," which runs a steamship service to Istanbul (Constantinople) the Levant ports and Alexandria.

Trade Statistics

The exchange fluctuations have been so great that comparisons, based on monetary figures, are misleading, unless due allowance is made for the change of values, and reliance should rather be placed on figures of shipping and goods tonnage.

For example, in comparing three typical years, as in the table shown on next page, it appears that in the six years—1920-26—while traffic increased 5-fold, the revenue increased 10-fold, but that in the six years—1926-32—while traffic was trebled, the revenue was halved in nominal value.

(*) "The Ports of Roumania," by Roy S. MacElwee, D. and H.A., Vol. VIII; "The Danube and Giurgiu," February; "Galatz and Braila," March; and "Constanza," April, 1928.

Port of Constanza—continued

	1920	1926	1932
Goods, in and out ...	350	1,850	5,150 thousand tons
Port Revenue ...	113	1,087	449 million lei

A striking feature in the traffic returns is the great preponderance of exports over imports. From the high ratio of 7 to 1 in 1926, this disparity increased to the overwhelming ratio of 67 to 1 in 1933. The imports are negligible in comparison with the volume of exports. The "factor of utilization" on vessels entering the port is consequently very low, thus:—

$$\frac{85 \text{ thousand tons Imports}}{5 \text{ million N.R.T. Shipping}} = 0.017$$

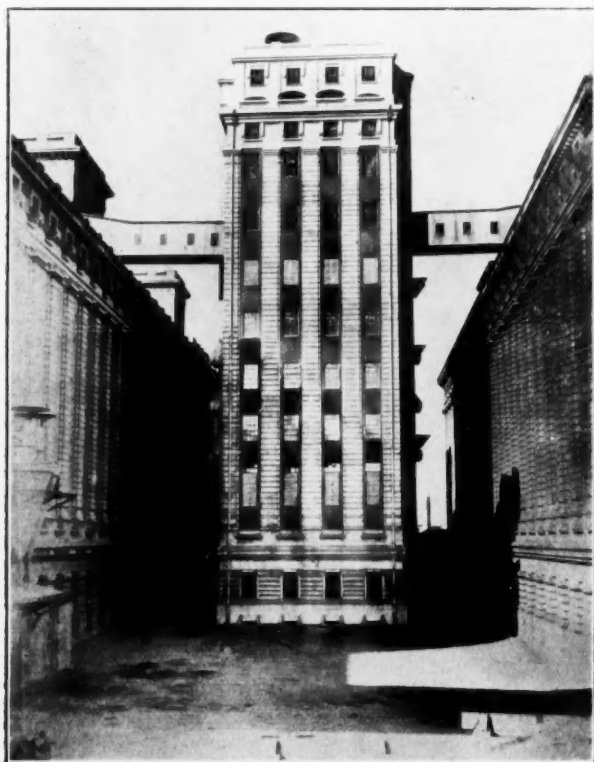


Photo D. Grain-drying Tower, between Two Blocks of Silos, on the Grain Quay.

On the other hand, for vessels outward bound, the factor of utilization is high, thus:—

$$\frac{5\frac{1}{4} \text{ million tons Exports}}{5 \text{ million N.R.T. Shipping}} = 1.15$$

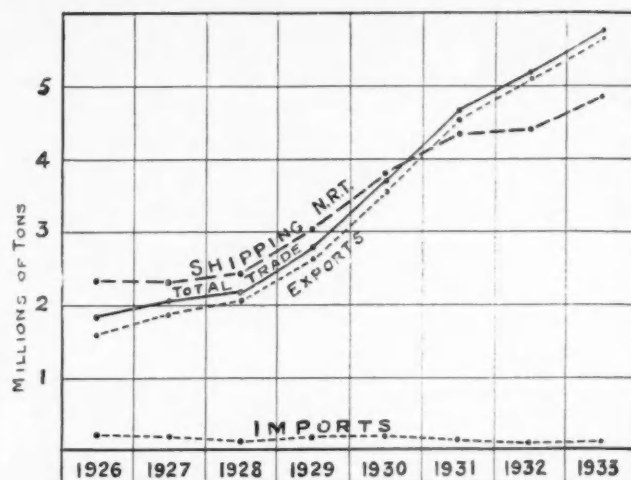
Thus it is almost entirely an exporting port, the chief export being petroleum at 86 per cent. of the total tonnage, with grain at 12 per cent., timber one per cent., and a dozen other classes of goods in fractional quantities. On analysis of the returns for 1933, it appears that the grain goes mostly to Germany, the Low Countries and England; the timber to France, Italy and Palestine, and the petroleum to England, Italy, France and Egypt. Of the total trade, the countries having the largest individual percentages are Great Britain with 20 per cent., Italy with 19 per cent., and France with 15 per cent. Egypt, with 11 per cent., and a dozen others from 8 down to 1 per cent., "also ran."

The imports, such as they are, consist mainly of coal, colonial produce and fruit, which have remained steady during the five years ended 1933, while in the same period the importation of iron and machinery has dropped from 100,000 to 14,000 tons.

To the statistics given in 1928, which extended to 1926 inclusive, the figures for later years can now be added, according to the following table and diagram.

TRAFFIC—SHIPPING AND GOODS.

	1926	1927	1928	1929	1930	1931	1932	1933
N.R.T. (thousands)								
Shipping Entered	2,355	2,344	2,486	3,022	3,842	4,382	4,446	4,924
Tons (thousands)								
Imports ...	234	180	130	174	165	119	81	85
Exports ...	1,582	1,850	2,050	2,606	3,548	4,578	5,101	5,704
Total ...	1,816	2,030	2,180	2,780	3,713	4,697	5,182	5,789



Traffic: Shipping and Goods.

Improvement Works

As already stated in the Introduction, the improvements anticipated in 1928 have been partly carried out as planned, and partly modified, while the ultimate programme of development awaits the demand of traffic for its execution. There were previously about 30 ships' berths, the construction of the new central jetty increases the number to about 40, and in ultimate development there would be 75. The maximum number of vessels in the port at any one time in 1932 was 44, and in 1933 was 55. The average daily number was 26 and 29 respectively.

The improvements may be classed under three heads:—

I—North or Inner Basin.

A reinforced concrete shed for general cargo has been built on the "New" Jetty, and the adjoining quay equipped with 3-ton semi-portal cranes, as seen in photo A.

On the East Quay a fine railway station has been erected, being completed in 1932, as seen in photo B.

On the North Quay, several sheds have been provided, as shown on the plan, but the very extensive sheds of the 1928 plan have not yet materialized.

The West or Grain Quay, already well equipped in 1928 with silos and conveyors, seen in photo C, has since been provided with a grain-drying installation, the main tower of which is seen in photo D.

II—South or Outer Basin.

This basin is developed by the construction of a central jetty, dividing it into two docks, one for oil tankers and the other for general service. In outline the construction follows the 1928 plan, except for the postponement of the dry-docks and Naval Yard then projected, but the provision of a slipway is still included. The depth of water is 8 metres generally, 9 metres in the Oil Dock and 9.2 metres in the Entrance.

The progress made during the 15 months ended March, 1934, comprised principally a considerable amount of dredging in rock and hard clay, depositing rubble wall foundations, forming a block-making yard and building quay-walls of 40-ton pre-cast blocks, the length of quay completed being 260 metres.

A tug, with Diesel engines of 600 horse power, is being provided.

III—Future Extension.

It is in regard to the further development of the port to the Southward that the present plan differs completely from the earlier one. The very extensive character of the enlargement ultimately contemplated is evident upon inspection. It would comprise a three-branched dock for general trade, within a Freeport Area to be established; in addition to two new oil docks, the provision of which might release the present oil docks for other use. The oil-storage tanks as existing are seen in photo E.

Such is the present position, and such are the prospects for the future further development of this efficient and enterprising port of Eastern Europe.

We are indebted to the Management of the "Service des Ports Maritimes" for the information given and for the photographs illustrating it.

Port of Constanza

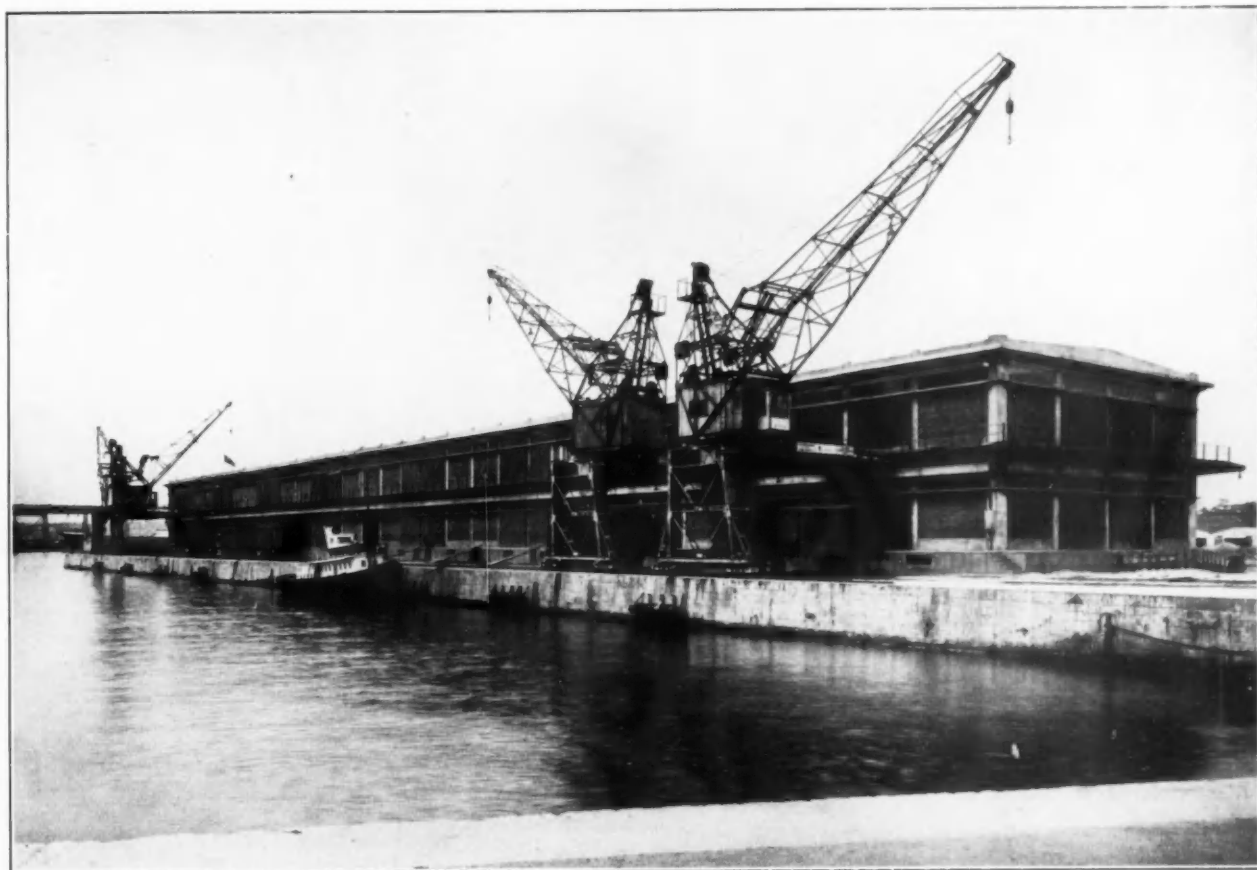


Photo A. New Jetty and General Cargo Shed of Reinforced Concrete, with 3-ton Semi-Portal Quay Cranes.



Photo B. Marine Railway Station and Quay of the S.M.R. (Roumanian Marine Service).

Hull and the East Coast

Meeting of Humber Conservancy Commissioners.

THE Humber Conservancy Commissioners have been placed on the horns of a dilemma by a request from the Board of Trade to be furnished with certain accounts for the past sixty-six years. As already reported in *The Dock and Harbour Authority*, objection has been raised by the Board of Trade to the pooling of certain foreshore accounts, and the Board have asked to be supplied with three separate accounts for 1934 and for information to enable the questions of financial adjustment between the Board of Trade and the Humber Conservancy Commissioners to be further considered. At the May meeting of the latter body the Chairman (Mr. J. H. Fisher, J.P.) moved, and Sir John Eaglesome seconded the adoption of the recommendations of the Works Committee that the Board of Trade be acquainted with the immense amount of labour which would be involved and the difficulties which would arise in furnishing in the manner desired the foreshore accounts respecting each of the past sixty-six years—a task which the Conservancy staff, at its present strength, would be unable to carry out in anything like a reasonable time. The resolution was adopted, and it was also agreed that it be explained that the Conservancy Board feel that it would be inequitable for them to have to furnish these accounts in respect of so great a number of years, with less than thirty of which are during the period of office of their predecessors, and that the Board of Trade be asked to consider (as the Conservancy Board had already done) the finding of reasonable means of providing an amicable solution of the serious question that has arisen. It now remains to be seen, if and in what manner, the Board of Trade can comply with the wishes of the Conservancy Commissioners.

Improvement to Ferry-handling Facilities at Hull.

In connection with the works being undertaken at Hull to improve the ferry-landing facilities, the Humber Conservancy Board have approved, subject to the sanction of the Board of Trade, of a proposal by the Hull City Engineer to adopt reinforced concrete piles and bracing instead of timber for the two landing stage dolphins at Victoria Pier. The Town Clerk has informed the Conservancy's Works Committee that the Corporation cannot accept the condition that they shall take an easement of the tidal lands concerned for thirty-one years at such rent as the Board of Trade on the recommendation of the Government value, and may require, unless and until the Corporation know the terms upon which the easement would be granted. The Town Clerk has also intimated that the Corporation cannot agree to the conditions that they shall accept all risk and responsibility on the ground that a section of the Public Works Facilities Scheme (Hull Corporation Victoria Pier) Confirmation Act, 1934, does not give the Board power to attach conditions, and that the Corporation are not prepared to waive the protection which they have under clause nine of the Humber Conservancy Act, 1905. The Humber Conservancy Board have decided to inform the Town Clerk that in submitting the scheme to the Board of Trade they will ask them to accelerate and acquaint the Conservancy Board with the Government valuation. The question of the other conditions has been left with the Board's Solicitor.

Flooding of the Upper Humber.

On the South or Lincolnshire bank of the upper Humber serious flooding has occurred at high tides of late, and plans have been submitted to the Minister of Agriculture and Fisheries for the carrying out of temporary defence works at an estimated cost of £3,000, while a larger scheme, more permanent in character, is under consideration, the cost of which is estimated at £107,000. According to a report made by the Engineer of the Ancholme and Winterton Catchment Board and presented to the Lindsey County Council, there is grave danger of part of the foreshore giving way, and of 3,000 to 4,000 acres of adjoining land and highway being flooded. There is also a possibility of the roadway subsiding where it adjoins the Humber in the parish of Winteringham. The high-authority of the County Council have undertaken a certain amount of protective work to preserve the highway, but it is said that it will be only a matter of time before the erosion eats its way round the protection. Similar conditions of currents and tides are playing havoc with the banks of the River Trent, in spite of ceaseless efforts of the Trent Catchment Board to strengthen the banks.

Everything seems to point to the urgent necessity for a training wall, which it is suggested would cost more nearly £500,000 than the £107,000 mentioned in connection with the scheme now contemplated. Higher up the river at the confluence of the Ouse and Trent, extensive training walls have been constructed, but much more requires to be done in the

upper part of the Humber to render the position quite satisfactory. It is, however, very largely a question of finance. Many years ago the Humber Conservancy had prepared for them a very comprehensive scheme for constructing training walls on either bank of the river above and below Hull, but it has only been possible to undertake a small part owing to the lack of money and the impossibility of increasing the dues on shipping in the present parlous condition of the shipping industry.

In connection with the erosion of the bank which supports the main highway alongside the River Humber in the parish of Winteringham, opposite Read's Island, the Lindsey County Council have asked the Humber Conservancy Board for information and data regarding the normal conditions of the bank and the changes which have taken place. The Board have considered the matter, and have authorised their engineer to receive officials of the County Council and the Land Drainage Committee, and to furnish them with any information he has in his possession.

Timber Imports at Hull.

The timber-importing season at Hull was in full swing at the end of May, fortunately without a recurrence of the delay and congestion which were an outstanding feature of last season. The numerous cargoes to hand from the Baltic and White Sea were being dealt with expeditiously, thanks to a good supply of wagons and bogies, and the efforts of all parties concerned. Not so many cargoes are expected in the early part of the season, as was the case a year ago, and this should prove an advantage. Nevertheless, efforts are not being relaxed to secure an improvement in conditions at the Victoria Dock especially, and pressure is still being brought to bear on the London and North-Eastern Railway directors to take into serious consideration the extension of the Victoria Dock, in order to provide additional discharging berths. This, of course, would involve the expenditure of a considerable sum of money, and before sanctioning it the directors want to be assured that the future requirements of the timber trade will warrant it. The imports of timber at Hull last year far exceeded a million loads, and created a record for the port. The Humber Shipbrokers' Association, in referring to the position, state that in other respects work generally at Hull docks has proceeded satisfactorily, and that good despatch has been consistently maintained, both in loading and discharging.

Hull Docks not so Busy as Last Year.

The Hull docks have not been so busy as last year. While shipments of coal and exports of general merchandise have been at about the same level as a year ago, the ports in the aggregate have been less. Imports of wheat and kindred cereals at the end of May were over a hundred thousand tons down, and there was also recorded a shrinkage of the arrivals of timber, provisions, lard, butter and eggs. On the other hand, imports of oilseeds showed an increase of 33,000 tons, and petroleum of over eleven million gallons, while imports of sheep's wool were nearly double; and bank clearings were practically the same as a year ago.

Facilities at Humber Ports.

With regard to the facilities at the various Humber ports, the Humber District Ship Brokers' Association, in their report, state that at Immingham experiments have been made in discharging iron ore by means of a grab, and that a second grab has recently been put into commission. It is expected that further grabs will be ordered shortly. At the Port of Goole the construction of a new lock to enter the docks at the end of the Dutch River is proceeding apace, and it is fully expected that it will be opened for use in the early part of 1936. The pier at the entrance has been built, and the main part of excavating is completed. The coal anti-breaker installed at Goole Docks some time ago is working so successfully that pressure is being exerted on the authorities to install a second one, and it is understood that the matter is likely to receive favourable consideration. At Boston four new 40-cwt. hydraulic cranes have been erected on the dock quay, and have already rendered good service. The riverside jetty and oil storage tanks completed last year largely increased the oil-capacity of the port. It is also reported that a Bill is being promoted in Parliament to authorise the raising of a loan to finance the construction of a riverside quay immediately above the dock for the accommodation of vessels discharging timber and other goods.

Ample storage space will be available near the site for timber, and it is intended to equip the proposed quay with cranes, sidings, roads and sheds for dealing with general merchandise with a view to relieving the congestion occasionally experienced at the dock.

Saint John Harbour, N.B.

Annual Report of the Harbour Commissioners for the Year 1934

IT was only in February, 1934, that the port, after three years of intense congestion, due to the destruction of facilities at West Saint John by the fire of June, 1931, was enabled to provide adequate services to the many steamship lines using the port, and the Commissioners take this opportunity of extending their appreciation and sincere thanks for the kindly consideration and patience shown by steamship companies during many difficult periods of congested shipping.

After the completion and opening for traffic by the Prime Minister, on the 28th February, of the Navy Island Pier and Quay, additional accommodation for four vessels was made available. This accommodation includes large fire-proof transit sheds, grain conveyor galleries and about ten miles of trackage, so that cargo, both export and import, may be handled with the minimum of delay.

The exports and imports have shown a steady increase since 1930, the total for 1934 being about a quarter of a million tons over that for 1933. Disregarding the grain handled, the general cargo tonnage is in excess of any previous year since the Commission took control.

The quantity of grain exported is a little less than 1933. While we have grain handling equipment superior to any other port on the Atlantic coast, yet, along with the other Canadian ports, the volume passing through has, since 1929, gradually decreased.

In other commodities there was a very decided increase, particularly in automobiles, cattle, lumber, potatoes and newsprint.

Three new steamship services, two to the Far East, the Ellerman & Bucknall Steamships and the Isbrandtsen Moller Line, to Japan, China and the Philippines, and one London Summer Service, the Ellerman Wilson Line, were established in the port.

Under the Public Works Construction Act, 1934, provision was made for an amount of \$2,000,000 for the reconstruction of Berths 1, 2, 3 and 4, which were demolished by the fire of 1931.

On the 1st August, a contract was let to the St. John Dry Dock & Shipbuilding Co., Ltd., for demolition of old cribwork and dredging of the site of the new work. During the year, plans and specifications for reconstruction were prepared, so that tenders could be called and the work of actual construction commenced, as soon as weather conditions permit, in the early spring of 1935. The plans provide for fire-proof structures.

There have, during the past few years, developed very pressing demands for storage facilities for various commodities passing through the port, and the Commissioners are considering erecting a temperature controlled building on No. 4 Berth, the lower storey to be frostproof and so built that railway cars could be loaded and unloaded inside the building. The upper storey would be used for storage.

Shipping.

The number of sea-going vessels entering the harbour was increased from 492 in 1933 to 557 in 1934, representing an increase of 206,000 net registered tons. This year's totals exceed the previous peak year of the Commission's administration, 1929, by 18 ships of 223,137 net registered tons.

The total number of vessels placed in dry dock during the year was sixty-seven.

NUMBER AND NET REGISTERED TONNAGE OF VESSELS

Arriving during 1934

Month	No. of Vessels			Net Registered Tonnage		
	Seagoing	Coastwise	Total	Seagoing	Coastwise	Total
January	64	87	151	238,189	61,371	299,560
February	61	69	130	204,657	53,138	257,795
March	67	89	156	242,883	65,260	308,143
April	49	105	154	161,855	58,930	220,785
May	35	197	232	82,267	72,711	154,978
June	39	152	191	94,180	68,030	162,210
July	36	136	172	88,480	67,780	156,260
August	48	163	211	112,425	72,249	184,674
September	40	147	187	109,507	75,027	184,534
October	44	139	183	96,167	69,272	165,439
November	26	104	130	72,269	64,350	136,619
December	48	106	154	202,456	68,510	270,966
	557	1,494	2,051	1,705,335	796,628	2,501,963

Departing during 1934

Month	No. of Vessels			Net Registered Tonnage		
	Seagoing	Coastwise	Total	Seagoing	Coastwise	Total
January	59	85	144	207,818	61,472	269,290
February	57	67	124	193,791	52,374	246,165
March	71	89	160	257,250	63,739	320,989
April	58	106	164	197,263	59,184	256,447
May	35	195	230	87,845	68,340	156,185
June	40	156	196	94,135	68,110	162,245
July	40	130	170	95,979	67,340	163,319
August	48	161	209	114,364	72,244	186,608
September	35	152	187	100,127	74,723	174,850
October	45	135	180	99,695	66,674	166,369
November	24	99	123	62,027	57,622	119,649
December	43	111	154	172,055	68,365	240,420
	555	1,486	2,041	1,682,349	780,187	2,462,536

NATIONALITIES AND NET TONNAGE OF SEAGOING VESSELS ARRIVING IN THE PORT OF SAINT JOHN

	1934		1933	
	No. of Vessels	Tonnage	No. of Vessels	Tonnage
American	132	366,976	83	240,945
British	283	1,108,130	287	970,943
Danish	10	17,312	10	8,994
Dutch	1	2,872	...	...
Finnish	1	16,146	...	...
French	10	30,205	9	25,109
German	1	2,781	...	...
Greek	23	12,172	...	...
Hondurian	4	13,402	8	23,533
Italian	...	...	3	12,715
Japanese	79	109,423	75	93,274
Norwegian	10	19,840	13	26,689
Panamanian	1	3,689	...	...
Polish	2	2,387	4	6,832
Swedish	...	...	...	...
	557	1,705,335	492	1,409,334

Cargo Tonnage.

The total cargo tonnage, combining import and export, handled through the port during the year 1934 was 1,465,824 tons. This is the largest tonnage handled since 1929. The increase over 1932, the lowest year in the intervening period, was about 50 per cent., and about 25 per cent. over the year 1933.

Imports handled during the year amounted to 633,042 tons, an increase of about 10 per cent. over the year 1933. The principal commodities showing an increase were coal, bananas, cottons, fertilizer, lumber, kerosene, cottonseed oil, rice, raw sugar, steel and tea. The coal tonnage has shown a steady increase from the beginning of the Commission's administration, this year showing an increase of 133 per cent. since 1928, and 11 per cent. over the year 1933. The cotton tonnage has about doubled, and flour has increased four times since 1928. Tea has shown a steady increase during the last six years, excepting during the year 1932, when only 117 tons were handled. The increase over the year 1928 was 270 per cent., and over the year 1933, was 80 per cent.

Exports for the year amounted to 832,782 tons, showing an increase of 26 per cent. over the year 1933. Exports, excluding grain, were the greatest since the Commission has been in existence, the increase since the previous peak in 1929 being 28 per cent. The increase over 1933 was 40 per cent. The principal increases are shown in the following commodities: automobiles and accessories, boxboard, canned goods, copper products, cattle, flour, lumber, meats, nails, rolled oats, fuel oil, potatoes, pulpwood, newsprint, shocks and woodpulp. Automobiles and accessories show the greatest increase, 220 per cent. since 1928, and about the same amount over 1933. Copper products show a more or less steady increase since 1928; the increase was about 200 per cent. in the intervening period, and about 40 per cent. over 1933. Cattle has increased from six head shipped in 1928 to 14,878 in 1934; the increase over 1933 was 40 per cent. Lumber shows an increase of 120 per cent. since 1928 and 55 per cent. over 1933. Meats show a large increase since 1928 and about 50 per cent. over 1933. Nails have shown a large increase since 1928. The increase in potatoes over 1933 was over 400 per cent., due to the very small quantity of this commodity shipped in that year. Newsprint shipments nearly equal the 1928 peak, and are about 600 per cent. over 1933. Woodpulp shipments were ten times greater than 1928 and 30 per cent. over 1933.

Saint John Harbour, N.B.—continued

PRINCIPAL CARGOES CARRIED BY SEAGOING AND
COASTWISE VESSELS

Inward Cargoes			
	Cargo	No. of Vessels	
General Cargo	912
Ballast	101
Coal	76
General Cargo in Transit	58
Oil and Gasoline	27
Sugar	20
Fertilizer	7
Sulphur	4
Corn	3

Outward Cargoes			
	Cargo	No. of Vessels	
General Cargo	978
Ballast	118
Lumber	34
General Cargo in Transit	28
Potatoes	13
Paper	9
Pulp	9
Grain	2

MONTHLY CARGO TONNAGE
Imports.

Month	1933	1934	Increase	Decrease
January	64,865	50,759		14,106
February	53,768	80,029	26,261	
March	53,362	72,297	18,935	
April	39,682	54,685	15,003	
May	42,896	43,878	982	
June	34,019	28,971		5,048
July	31,545	35,093	3,548	
August	37,157	49,711	12,554	
September	38,736	44,498	5,762	
October	71,602	51,596		20,006
November	26,873	32,523	5,650	
December	83,362	89,002	5,640	
	577,867	633,042	55,175	

Exports.

Month	1933	1934	Increase	Decrease
January	131,105	115,771		15,334
February	118,762	151,978	33,216	
March	130,019	183,273	53,254	
April	56,299	147,034	90,735	
May	16,213	17,579	1,366	
June	23,644	27,104	3,460	
July	19,409	27,182	7,773	
August	25,583	25,718	135	
September	17,199	25,156	7,957	
October	24,592	27,834	3,242	
November	14,245	13,552		693
December	86,213	70,601		15,612
	663,283	832,782	169,499	

MONTHLY CARGO TONNAGE
Imports and Exports

Month	1933	1934	Increase	Decrease
January	195,970	166,530		29,440
February	172,530	232,007	59,477	
March	183,381	255,570	72,189	
April	95,981	201,719	105,738	
May	59,109	61,457	2,348	
June	57,663	56,075		1,588
July	50,954	62,275	11,321	
August	62,740	75,429	12,689	
September	55,935	69,654	13,719	
October	96,194	79,430		16,764
November	41,118	46,075	4,957	
December	169,575	159,603		9,972
	1,241,150	1,465,824	224,674	

COMPARATIVE TONNAGE
1928 to 1934

Year	IMPORTS		EXPORTS	
	Total	Grain	General	Total
1928	578,477	655,240	493,013	1,148,253
1929	657,796	676,297	512,127	1,188,424
1930	681,314	280,591	443,713	724,304
1931	596,596	301,344	382,737	684,081
1932	554,859	179,402	367,440	546,842
1933	577,867	198,038	465,245	663,283
1934	633,042	181,067	651,715	832,782

Grain.

The total grain handled was greater than for the two previous years, but grain exported was slightly less than the year 1933. Three cargoes, amounting to over one half million bushels of African corn, were received at the Canadian National Railways elevator, and a part of this was delivered to cars for domestic consumption.

The first grain was taken into the Commissioners' new elevator in the month of April. Over a million bushels were taken in for storage, only a small quantity of which was shipped out before the end of the year. Quick despatch is obtained in this new plant, both in receiving and shipping, and it is very satisfactory in every respect.

GRAIN ELEVATOR RECEIPTS AND DELIVERIES
1934

Receipts						
Elevator	Wheat	Oats	Barley	Corn	Buckwheat	Total Bushels
Harbour Com.	1,115,998	...	...	...	...	1,115,998
Can. Pac. Ry.	5,712,600	322,081	87,102	42,836	73,488	6,238,107
Can. Nat. Rys.	...	...	...	*551,736	...	551,736
	6,828,598	322,081	87,102	594,572	73,488	7,905,841

Deliveries						
Elevator	Wheat	Oats	Barley	Corn	Buckwheat	Total Bushels
Harbour Com.	82,067	...	...	...	...	82,067
Can. Pac. Ry.	5,730,111	315,974	71,647	42,836	30,421	6,190,989
Can. Nat. Rys.	...	...	...	*313,789	...	313,789
	5,812,178	315,974	71,647	356,625	30,421	6,586,845

* African corn received by ship and delivered to cars for domestic consumption.

COMPARATIVE GRAIN DELIVERIES

Year	Canadian Grain	American Grain	African Grain	Total Bushels
1928	11,023,541	12,188,228	...	23,211,769
1929	10,588,466	12,541,940	...	23,130,406
1930	5,743,107	3,650,462	...	9,393,569
1931	9,914,667	440,367	...	10,355,034
1932	4,603,338	1,707,523	...	6,310,861
1933	6,140,281	520,517	...	6,660,798
1934	6,210,053	63,003	*313,789	6,586,845

* For domestic consumption.

Facilities.

West Side. There are eleven deep-water berths on the West side of the harbour. Of these, nine are equipped with steel and concrete transit sheds, one with a semi-fireproof frostproof and temperature controlled shed, and one is an open berth. Nine berths are equipped with grain shipping galleries and travelling shiploaders. All berths are served by tracks at the rear of the sheds, and six by tracks on the wharf apron. Each shed has a suite of heated offices and gear rooms, and well equipped heated rest rooms are provided for the longshoremen. Modern sanitary arrangements are provided in all sheds.

Berths A and B are leased by the Canadian Pacific Steamships for their passenger and general cargo terminal. The other berths are available for general shipping.

East Side. On the East or City side of the harbour, there are six berths, two of which are equipped with wooden grain shipping galleries. Five berths are served by tracks on the wharf apron, four with tracks at the rear of the sheds, and two with tracks in the centre of their common shed. All sheds are equipped with heated offices and longshoremen's quarters.

Reed's Point Wharf is leased by the Eastern Steamships for their Boston service, and the New Pier wharf is leased by the Canadian Pacific Railway for their Digby service. The Canadian National Steamships use McLeod Wharf for their West Indies service.

Cattle Shed. Besides the sheds mentioned on the west side of the harbour, the Canadian Pacific Railway Company own and operate a well-equipped cattle shed with capacity for about 1,000 head. The shed is located at the Bay Shore railway yard, from which point the cattle are transferred in cars to the various berths for shipment.

Dry Dock. The St. John Dry Dock & Shipbuilding Co., Ltd., own and operate a first-class two-berth dry dock and a marine railway at Courtenay Bay. This plant is equipped with first-class shops and is able to handle any kind of ship repairs and outfitting. This year, 67 vessels of 104,000 gross tons were dry-docked.

Towing and Bunkering. Two-boat service and adequate coal and oil bunkering facilities are available.

Heavy Lifts. The Commissioners have made arrangements with the St. John Dry Dock Company for the use of their crane for making heavy lifts from vessels. This crane has a capacity of 40 tons at 42 ft. 6 ins. from the face of the wharf, and 10 tons at 72 ft.

GRAIN ELEVATOR FACILITIES

Elevator	Storage Capacity Bushels	Receiving Capacity Bushels per hr.	Shipping Capacity Bushels per hr.	Length of Galleries Feet
Harbour Commission	1,500,000	25,000	60,000	11,428
Canadian Pacific Ry.	1,000,000	16,000	60,000	1,460
Canadian National Ry.	500,000	6,000	15,000	
	3,000,000	47,000	135,000	12,888

Note: Berths Nos. 5, 6, 7, 15 and 16 each have a shipping capacity of 40,000 bu. per hr.

Berths Nos. 14, A, B and Navy Island each have a shipping capacity of 20,000 bu. per hr.

Pettingill and McLeod Berths each have a shipping capacity of 15,000 bu. per hr.

DRYDOCK FACILITIES

Total Length Feet	Length Outer Dock Feet	Length Inner Dock Feet	Width at Floor Feet	Width at Coping Feet	Depth over Sill Highwater Feet
1150	650	700	125	133	12

Notes from the North

Chester Waterway Improvements Contemplated.

CHESTER Corporation has had correspondence with the Dee Conservancy Board as to: (1) the proposals which have been made for improving and maintaining the channels of the River Dee with a view to attracting more tonnage to the ports of Connah's Quay, Sandycroft and Chester, and (2) the suggestion that local authorities and other bodies concerned should co-operate in sending a deputation to the Minister of Transport and the Board of Trade as to financial assistance being granted by the Government. Chester has intimated its willingness to send representatives to a conference of local authorities and other bodies concerned to consider the proposals and suggestions which have been made, but state the opinion that before a deputation is sent to any Government department there should be a definite scheme for improving the navigation of the river agreed to by the Board and the local authorities.

New Lifting Gear.

The Isle of Man Harbour Commissioners have placed an order for a set of Florenes lifting gear to enable them to embark and discharge cars at the Victoria Pier in the quickest and best way known. This gear, the invention of a Belgian, is in use at most of the Continental harbours and at Dover, and it can handle a car every 30 seconds. This gear was put into use in the early part of June.

Mersey Tunnel Developments.

Mersey Tunnel Joint Committee has called on the engineers to prepare a report on the possibility of using the lower half of the Queensway Tunnel for some traffic purposes. This represents the first definite move since the opening of the tunnel, nearly twelve months ago, towards finding a use for the vacant space beneath the existing traffic roadway under the river.

The Committee also decided to extend the system of rubber guide posts throughout the tunnel, the posts to be placed at intervals of 100 ft., in order to facilitate line-keeping by the vehicles.

The brickwork shell being built round the six ventilating fans in the new ventilation station for the Queensway Tunnel, on the river wall near the entrance to the Morpeth Dock, Birkenhead, is rising with considerable rapidity, and already the major portion of the building is enclosed. In a short time the brickwork of the tall tower will be begun.

Ordinarily, the outer building is erected first and the internal machinery put in afterwards, but the reverse is taking place in connection with the ventilation station, the concrete enclosures for the fans having been completed before the outer wall was begun. When it is completed, Birkenhead will have three ventilating shafts.

Birkenhead Port Plans.

There has been formed at Birkenhead a Special Port Development Committee with the object of putting a check to the drifting away from the town of its industries, and generally to publicise the port. Meetings have also been held in connection with the freight charge negotiation between the railway companies, the shipping lines using the Birkenhead docks, and the Mersey Docks and Harbour Board.

The object of the negotiations is to bring about uniformity in the freight charges in operation at the Birkenhead and Liverpool sides of the river. Those at Birkenhead are considerably higher than Liverpool's, with the result that certain steamship lines have transferred part of their loading activities to Liverpool.

Dredging.

Maryport (Cumberland) Harbour Commissioners have been advised by the Commissioner for Special Areas of the full grant towards the cost of the scheme to dredge Maryport harbour and dock entrance. The entrance has silted and indirectly threatened the employment of 600 men at two collieries and about 400 in other trades. The grant will be about £4,000.

Harbour Maintenance Works.

The Isle of Man Parliament has voted £21,294 for the maintenance of harbours and £5,000 for reconstruction of the Peel old pier, repairs to the south side of the widening of the Douglas Quay roadway. During the debate, a protest was made against the Harbour Board having this year laid a new surface on the North Quay, Douglas, and proposing to take it up next year. The Receiver-General explained that the present road was put down temporarily and would not stand heavy traffic for any length of time. It would be taken up after the summer.

Obituary.

Mr. A. W. Tongue, secretary of the Isle of Man Harbour Board, passed away, recently, at the age of 54 years. He was appointed secretary of the Board on 1st July, 1919.

Overawed by the Mersey.

Reference was made at Flintshire County Council to a scheme for the improvement of the navigation of the River Dee. Mr. T. G. Evans said this was a matter of great importance to the country. For the last 25 years the River Dee had been under their observation, and he believed that in the archives of the office were reports from eminent engineers, but nothing had been done. They in Flintshire had been far too timid and overawed by their neighbours across the border on Merseyside, who had thought in millions. He pressed the County Council to support any scheme for the improvement of the river. Mr. Geoffrey Summers replied that the Board was to meet and draw up a concrete scheme to circularise to the local authorities concerned for their opinion.

£11,000 Reconstruction.

After prolonged negotiations a settlement has been arrived at in regard to Wallasey Corporation's claim for damages following the destructive collision in May, 1932, of the steamer "British Commander" with Egremont Pier. The Corporation are to receive from the companies concerned the sum of £12,000, representing £11,000 for the work of reconstruction and renovation and £1,000 for loss of revenue while the ferry was closed. The Corporation have, it is stated, expended £12,200 in all, so that they have got a practically new pier and are only £200 out of pocket.

The Wallasey Ferries Committee recommends that, in view of the proposal of the Mersey Tunnel Joint Committee to vary the rates charged in respect of certain classes of vehicles, the general manager be authorised to amend the schedule of tolls on the ferries goods service in accordance with such variations and that, in the event of the Tunnel Committee making any further variations, he be authorised to make similar amendments to the ferries goods tolls.

Appointment.

Mersey Docks and Harbour Board proposes to appoint Capt. R. J. Hodges, of Glasgow, as an additional assistant to the general manager. Capt. Hodges was a director and manager of the Anchor Line, Ltd., in Glasgow, for some time before the reorganisation under the chairmanship of Lord Runciman. After the war he came to Liverpool for the Cunard Company, but later left Liverpool to take up his Anchor Line appointment in Glasgow.

New Sea Wall.

It is announced that the scheme for the sea wall at Maryport has been provisionally passed by the District Commissioner. The General Purposes Committee is recommending the Maryport Council to engage an engineer to report on the proposed scheme, and also to give an estimate of the cost, as a preliminary to obtaining a Government grant.

Road Bridge across the Dee.

The River Dee Conservancy Board at a meeting at Chester discussed, with representatives of other authorities, a proposal to improve the estuary of the Dee. An endeavour is to be made to enlist the sympathy of all authorities who might be affected before the schemes are sent up to the appropriate Ministry.

The major scheme, it is understood, might cost about £400,000. This is intended to meet not only the requirements of navigation, but also the interests of transport across the Dee from Wirral to Wales, the fishermen of the upper and lower reaches, and the industries on the river and estuary.

One of the original features of this project is a proposal to throw a new road across the river in a line with Burton Point. This would relieve the Queen's Ferry Bridge, which is about two miles nearer Chester, of some of the abnormal amount of traffic passing between Merseyside and North Wales. The project also provides for canalising the Dee from Connah's Quay to Chester.

This would necessitate sluices and locks at Connah's Quay, and the extension and improvement of existing embankments and training walls. The "canal" would link up more effectively the River Dee with the canal system of Merseyside and the Midlands by means of the Shropshire Union Canal at Chester. The minor scheme, which is an alternative, deals mainly with such improvements as can be effected to the present training walls, and would cost not more than £40,000.

*Notes from the North—continued***Liverpool Docks Inspection.**

The Prime Minister of Australia, Mr. J. A. Lyons, on the occasion of his visit to Liverpool, made a tour of the Liverpool Dock Estate. He drove to the Prince's Landing Stage and embarked on the Dock Board tender "Vigilant" for a river cruise and a tour of the north docks. Aboard the steamer, he was welcomed by Mr. H. Sutton Timmis and Lieut.-Col. J. G. B. Beazley, members of the Board; Mr. L. A. P. Warner, Col. T. H. Hawkins (assistant manager of the Dock Board), and Capt. F. W. Mace (Marine Surveyor). The "Vigilant" sailed slowly to the Gladstone docks, where she locked in and steamed to the Huskisson Branch Dock No. 1, affording the visitors an opportunity of inspecting the excellent facilities of the port for handling various classes of cargo.

Mr. Lyons said:—"I am tremendously impressed by the magnitude of your dock system and the facilities it must offer for big trade. One thing that impresses me very much is the capital invested in the docks. I was glad to see one ship, at any rate, which trades to Australia."

Another Mersey Bridge Suggested.

Owing to the inadequacy of the Runcorn transporter, which spans the River Mersey connecting up the towns of Widnes and Runcorn, it is proposed that there should be constructed a new modern road bridge.

The Runcorn transporter is an interesting engineering structure, communication between the two being provided by means of a transporter car suspended from an overhead framework.

The transporter car consists of a platform, 55 ft. long and 24 ft. wide. It is capable of holding at any one time about ten motor vehicles and 300 passengers. On the top of the car is fixed the operator's cabin, in which is placed the switch-board so that the operator has a full view of the course. The time occupied in crossing the river is about four minutes, so, allowing time for loading and unloading, there are about six trips an hour. Both Widnes and Runcorn attract a great deal of industrial traffic, and this is supplemented in the summer time by a great number of pleasure cars bound for North Wales or for Lancashire.

As the transporter is a successful and profitable enterprise, there is no dissatisfaction on the part of the local authorities

directly concerned, though they must be ready to admit that the transporter does put a brake on the amount of traffic which would normally pass between the two towns. The remedy would appear to be a new road bridge providing free and uninterrupted access to both sides of the river. However, the matter is still very much in the air, being merely in the discussion stage at the Widnes Chamber of Commerce.

One member, Mr. Calvert, remarked that it had been declared that the life of the present bridge was only 15 years. In his opinion it would not be very long before the present bridge would be totally inadequate to cope with the amount of traffic. There was a desire to do away with the delay in crossing. Runcorn and Widnes were 20 minutes apart at the very quickest, which was absurd in these days of quick transport. It did not facilitate trade between the two towns when there was no efficient cross-river communication. Some traffic now gave Runcorn and Widnes a miss and preferred to take a more circuitous course rather than incur delay in getting a place on the transporter. The Chamber of Commerce decided to postpone further consideration of the proposal, as further facts will be brought forward.

Proposed Bridge over Ribble.

A special sub-committee of the Blackpool Town Council has reaffirmed a decision reached by the Corporation in 1931 that construction of a bridge over the Ribble between Guide's House on the Lytham side and Hesketh Bank on the other side would be a distinct benefit to Blackpool and adjoining districts. The Committee had again considered plans submitted by Mr. George Bennie, the Glasgow inventor, to bridge the river by means of a rail-plane and a bridge for road traffic. Mr. Bennie has on a number of occasions met the Blackpool Corporation, but he now states that the cost of the proposed scheme would be considerably less than at first estimated. The original estimate was nearly one million pounds, but this cost had been reduced to £750,000. He told a Corporation Committee that he had a promise of financial backing for the scheme, and that all he requires is the moral support of local authorities in the area. Blackpool Town Council have already approved the plan in principle, and, as indicated, the Corporation have now been asked by the sub-committee to reaffirm this decision.

Port of London Notes**London's Shipping.**

During the week ended May 31st, 1,023 vessels, representing 1,088,573 net register tons, used the Port of London. 504 vessels (873,886 net register tons) were to and from Empire and Foreign Ports, and 519 vessels (214,687 net register tons) were engaged in coastwise traffic.

Eleven timber-laden vessels docked with 22,774 tons of softwood.

* * * *

During the week ended June 7th, 1,074 vessels, representing 1,081,307 net register tons, used the Port of London. 538 vessels (875,448 net register tons) were to and from Empire and Foreign Ports, and 536 vessels (205,859 net register tons) were engaged in coastwise traffic.

Eighteen timber-laden vessels docked with 21,200 tons of softwood.

* * * *

During the week ended June 14th, 1,061 vessels, representing 945,977 net register tons, used the Port of London. 474 vessels (745,946 net register tons) were to and from Empire and Foreign Ports, and 587 vessels (200,031 net register tons) were engaged in coastwise traffic.

Twenty-five timber-laden vessels docked with 39,239 tons of softwood. These vessels included the first shipments from Archangel and from Leningrad this season.

* * * *

During the week ended June 21st, 995 vessels, representing 939,158 net register tons, used the Port of London. 504 vessels (729,400 net register tons) were to and from Empire and Foreign Ports, and 491 vessels (209,758 net register tons) were engaged in coastwise traffic.

Twenty-three timber-laden vessels docked with 41,063 tons of softwood.

Tilbury Landing Stage.

Forty-eight vessels, totalling 482,558 gross register tons used the Passenger Landing Stage during the month of May.

Port of Rotterdam

The Rotterdam Chamber of Commerce have now issued the statistics for the Port of Rotterdam for the first quarter of 1935. The figures in parentheses refer to the corresponding period of the preceding year.

During the first quarter of 1935—3,107 (3,092) sea-going ships, measuring 5,019,784 (4,809,735) tons net, entered into the various ports along the waterway between Rotterdam and the sea (New Waterway) as also into Dordrecht (forming together the sea-ports in the Rhine-Meuse delta).

Of these ships, 2,694 (2,653), measuring 4,313,229 (4,084,297) tons net, visited Rotterdam. Of these ships, 707 (701) carried the German flag, 599 (661) the Dutch flag, 436 (491) the British flag, 199 (145) the Swedish flag, 166 (166) the French flag, 163 (141) the Norwegian flag, 90 (72) the Italian flag, etc.

Of 1,046 (1,082) regular sailings, 470 (515) were with Great Britain and Ireland.

There were 1,642 (1,669) departures of loaded ships, of which 975 (1,066) were loaded with general cargo, and 1,863 (1,884) entrances of such ships, of which 684 (682) loaded with general cargo.

The total goods traffic by sea of Rotterdam and the small ports in the environs amounted, during the first quarter of 1935, to about 7,836,000 (6,606,000) tons of 1,000 kilos, against 5,917,000 (5,014,000) tons for Greater Hamburg and 4,726,000 (4,783,000) tons for Antwerp. Consequently, Rotterdam occupied again during this period the first place on the Continent, as regards goods traffic.

The international goods traffic on the Rhine from and to Rotterdam amounted, during the first quarter of 1935, to about 5,375,600 (4,721,600) tons of 1,000 kilos, being 54.6 per cent. (50.33 per cent.) of the total Rhine traffic via the Dutch frontier.

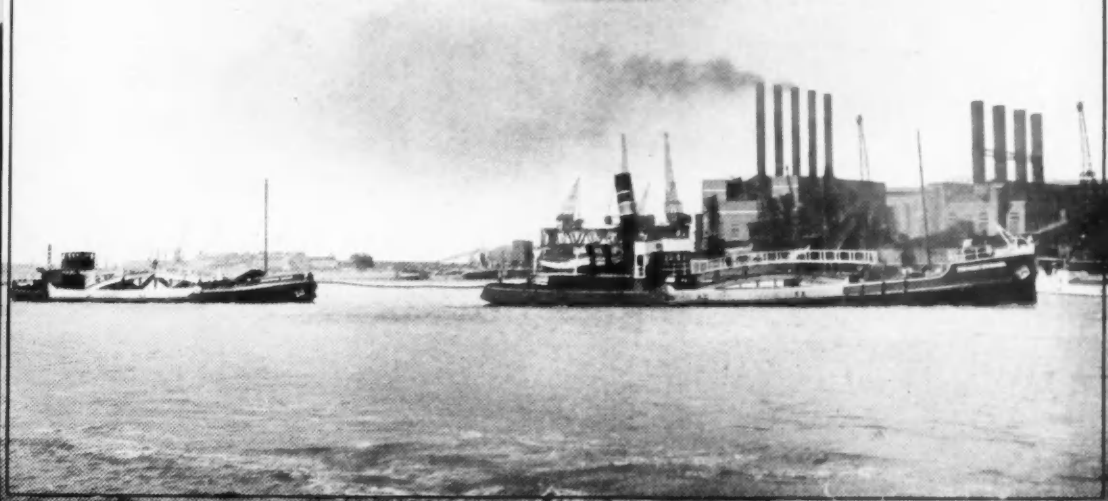
As to the passenger traffic by sea 14,568 (14,349) persons arrived at Rotterdam, and 15,857 (14,901) persons sailed from here.

The ore arrivals in Rotterdam and environs amounted to about 1,930,000 (998,000) tons.

The floating grain-elevators transhipped about 622,500 (808,100) tons of grain.



Established 1884



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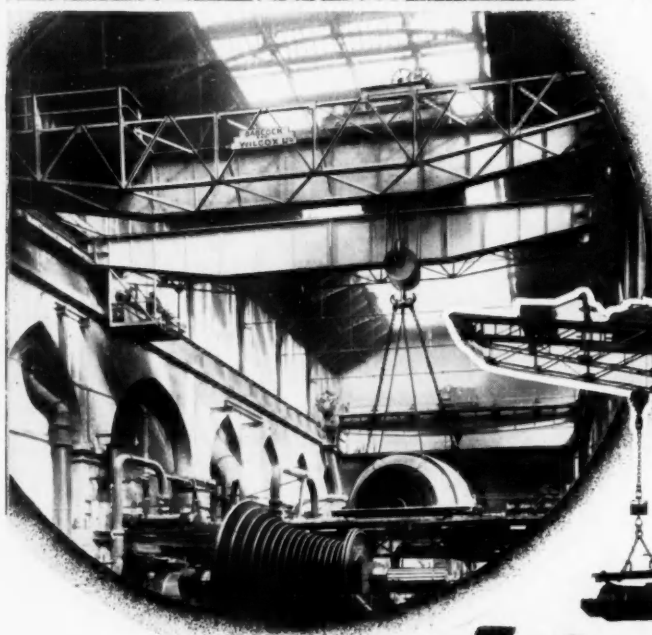
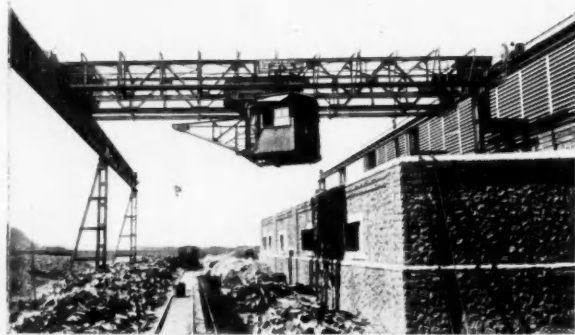
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CRANES FOR ALL PURPOSES

The Babcock Level Luffing Jib Crane is so prominently seen that it sometimes happens that the name "Babcock" is associated with that type of crane only. The illustrations reproduced on this page give typical examples of other "Babcock" cranes. From top to bottom they are:—

- (1) FIUME DOCK. 100 ton Electric Travelling Goliath Crane, fitted with two independent crabs. Span 66.8 metres (219 feet 2 inches).
- (2) South Indian Railway. Trichinopoly Workshops. 2 ton Electric Underhung Jib Crane to operate bottom opening skips for charging cupolas, and also to operate electric magnet. Radius 11 feet (3.35 metres) span 55 feet (16.76 metres).
- (3) London Power Company Ltd. Deptford East Power Station. 80 ton Electric Overhead Travelling Crane fitted with Dynamic Braking. Four Motor Type. Auxiliary hoist 10 tons. Span 62 feet (18.89 metres). A second similar crane is also installed.
- (4) J. Samuel White & Co. Ltd., East Cowes, Isle of Wight. 80 ton Electric Giant Crane placing turbines on board H.M.S. Redgauntlet. Extreme radius Main Trolley 72 feet 6 inches (22.0 metres). Extreme radius Auxiliary Trolley 102 feet 6 inches (31.24 metres).



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Refal

「KOUKOKUSHA NI OTEGAMI ONSASHIDASHI NO SAIWA DOJO "DOCK AND HARBOUR AUTHORITY" NITE GORAN NO MUNE ONKAKISOE NEGAIMASU.

Future Development of the Port of Colombo

THE Colombo Port Commission has had under consideration various Press reports, which have recently appeared and which indicate that there exists some misapprehension in the mind of the public as to the future policy of development and expansion in the Port of Colombo. The Commission considers it in the general interest that a clear statement should be made public as regards both the present position and also the future development of the port.

1. There appears to be an impression that port dues in Colombo are already too high, higher than in other Eastern ports, and ought to be reduced. This is evidently due to some misunderstanding, for the fact is that port dues in Colombo compare very favourably with other ports. For example, a cargo vessel of 6,000 tons would, in Colombo, pay by way of entering dues, pilotage, mooring charges, etc., about Rs. 573/-. A similar vessel in Rangoon would, for the same services, pay at least Rs. 2,702/-; in Bombay, Rs. 1,630/-; in Karachi, Rs. 1,628/-; and in Calcutta, Rs. 1,992/-. A fairly large liner of 14,000 tons would, in Colombo, pay Rs. 1,729/-, compared with Rangoon, Rs. 5,952/-; Bombay, Rs. 3,575/-; Karachi, Rs. 3,666/-; and Calcutta, Rs. 4,568/-. It is therefore safe to say that, even admitting that certain improvements in Colombo are desirable in order to keep pace with competition, these can hardly be looked for in the direction of any appreciable decrease in port dues, which are by comparison with other ports obviously on the light side.

2. Owing possibly to the absence of any authoritative statement on the subject, a certain amount of misconception appears to prevail as to the future policy of the Port Commission with regard to the provision of a wet dock. The only definite proposal at present under consideration is the construction of two quays, an oil dock, and a basin, immediately to the north of the graving dock in order to provide much needed facilities for the discharge and loading of petrol, kerosene and liquid fuel, and a refitting berth. The oil bunkering trade in Colombo has of recent years increased by leaps and bounds, and the present facilities are notoriously quite inadequate. There is at present room for only one vessel at a time at the Guile Pier, and the berth is so situated as to preclude access to the graving dock, with the result that if a vessel has to enter or leave the dock either that vessel is delayed or any oil tanker which may happen to be working has to stop work and go back to moorings while docking operations are taking place; at certain times of the year when the dock is in frequent use for refitting H.M. ships and mercantile vessels, great inconvenience and delay are caused. There is also the further question of the safety of shipping. In all ports every endeavour has been made to confine the handling of dangerous petroleum from or into tankers to an area which is as far removed as practicable from the vicinity of other shipping. In Colombo this precaution is lacking, and the authorities are not at all satisfied, in the interests of the safety of the port, with the present arrangements. From the point of view therefore, both of safety and of adequacy of facilities, further accommodation for tankers is an urgent necessity, and it is believed that this urgency is recognised by all concerned. The present proposal therefore is to construct an oil dock in order to provide safer and more adequate facilities for tankers. The basin will provide increased facilities for re-fitting vessels, the present facilities being quite inadequate and forming a definite discouragement to the use of the port for this purpose.

3. The construction of a deep-water wet dock is an entirely different matter; it still is as it has always been, a future possibility, and has so far not got to the stage of a definite proposal. This wet dock is commonly supposed to be in some way connected with the landing of passengers, etc., straight on to dry land, instead of through the intermediary use of launches. The real position, however, is as follows:—The present water area of the Port of Colombo is, roughly, one square mile—to be exact, 643 acres, containing accommodation for 40 vessels during the South-west monsoon and 36 vessels during the North-east monsoon. Before the depression set in, the accommodation of the port was on occasion somewhat severely taxed, and for years past the harbour authorities have been casting their minds forward to the possibility of the accommodation being found inadequate to deal with increasing traffic. In such an event it might be necessary seriously to consider the extension of the water area of the harbour, in order to accommodate the demands of increased tonnage entering the port. It is clear that this extension cannot take place seawards; the alternative, therefore, is to extend inland; and after full consultation with the consulting engineers in London, it has been agreed generally that the extension should take the form of a channel leading from the harbour inland and expanding into a wet dock, with alongside accommodation.

It should, however, be clearly understood that such an extension is not an immediate concern and will only be considered as a definite plan if and when increasing traffic throws a strain upon the present accommodation of the port which it is unable to meet.

This wet-dock scheme is in no way connected with the construction of the oil dock and basin at present under consideration, though it does in a sense form an extension of the latter in that, for reasons of economy, the entrance to the wet dock would be through the basin. But the two schemes are independent of each other, and the construction of the oil dock, quays and basin in no way commits the port to the further construction of a wet dock.

One of the main uses to which the wet dock would be put, with its alongside accommodation, would probably be the landing of rice and the landing and shipping of coal. The present methods of handling rice involve manual labour at all stages between the vessel and the warehouse, and the transfer of the grain to the Chalmers Granaries by antiquated bullock cart transport which crosses one of the busiest lines of the city traffic. The discharge and bunkering of coal are still done by hand, and in this respect Colombo has much to learn from other ports; rail access to a quay, alongside which a vessel can lie, would probably prove a great improvement on the present methods of handling coal even without any elaborate plant for mechanical handling. Even if a wet dock were constructed, it could only accommodate a few vessels at a time, and would not materially affect the present methods of handling cargo, namely, by lighter, nor would it appreciably affect the present system whereby passengers are landed at the jetty, for it is not proposed to land passengers at a spot far removed from the port.

4. Another point which has been raised is the cost of construction of a wet dock. There appears to exist a general assumption that shipping will have to pay for any improvement to, or expansion of, the port. But so far as the Port Commission is aware, the question of cost has never been discussed, and it is at the least premature to assume, especially when every effort is being made to attract and not to discourage shipping, that shipping alone will have to bear a charge which could, and might justifiably be met by the general taxpayer whose asset, in the port, would thus be enhanced in value. In any event, the Port Commission considers it unnecessary to confuse the issue by premature speculation on this aspect of the question, which will doubtless be fully considered and discussed before any definite step is taken in the direction of expansion.

5. Further attention has been drawn to the shortcomings of Colombo as a coaling port, but the Port Commission is entirely alive to the position. There is little doubt that Colombo is losing its popularity as a coal-bunkering port, and compares unfavourably with several of its competitors, both in the rate of handling and in the charges for labour, rent and port dues. This question has been under consideration for some time by a special Sub-Committee of the Port Commission, which has been going into the matter of costs generally, but it must be remembered that the cost of coaling is not entirely within the control of the Port Commission; for example, the cost of labour cannot be regulated by anything the Commission can do, though port dues, which also affect the question, are a matter in which the Port Commission has some say. Full enquiries have been made, and the question is at the moment being considered whether the popularity of Colombo as a coal-bunkering port could not be increased by some reduction in costs, including the port charges imposed upon vessels entering to land or bunker coal.

This Sub-Committee is also reviewing the entire scale of charges, both on vessels and on cargo, and will shortly be in a position to make definite recommendations with a view to maintaining and increasing the popularity of Colombo as a port.

Canada's Canal Traffic in April.

Navigation through the Welland Ship Canal started this year on April 4th, or 13 days earlier than in 1934, whilst the first lockage on the St. Lawrence Canals was on April 10th, or eight days earlier than the year before.

Canada's External Trade during the Fiscal Year 1934-35.

During the fiscal year ended March 31st 1935, Canada's imports reached a total of \$522,417,000, an increase of 20.4 per cent. during the twelve months and of 28.6 per cent., as compared with the 1932-33 total. Exports of Canadian goods were valued at \$659,474,000, a gain of 13.8 per cent. during the year, and of 39.2 per cent. since 1932-33. Total external trade is valued at \$1,189,550,000, a rise of 16.7 per cent. during the twelve months, and of 34.1 per cent. during the two years since the coming into force of the Ottawa Agreements.

New £150,000 Wharf at Ellesmere

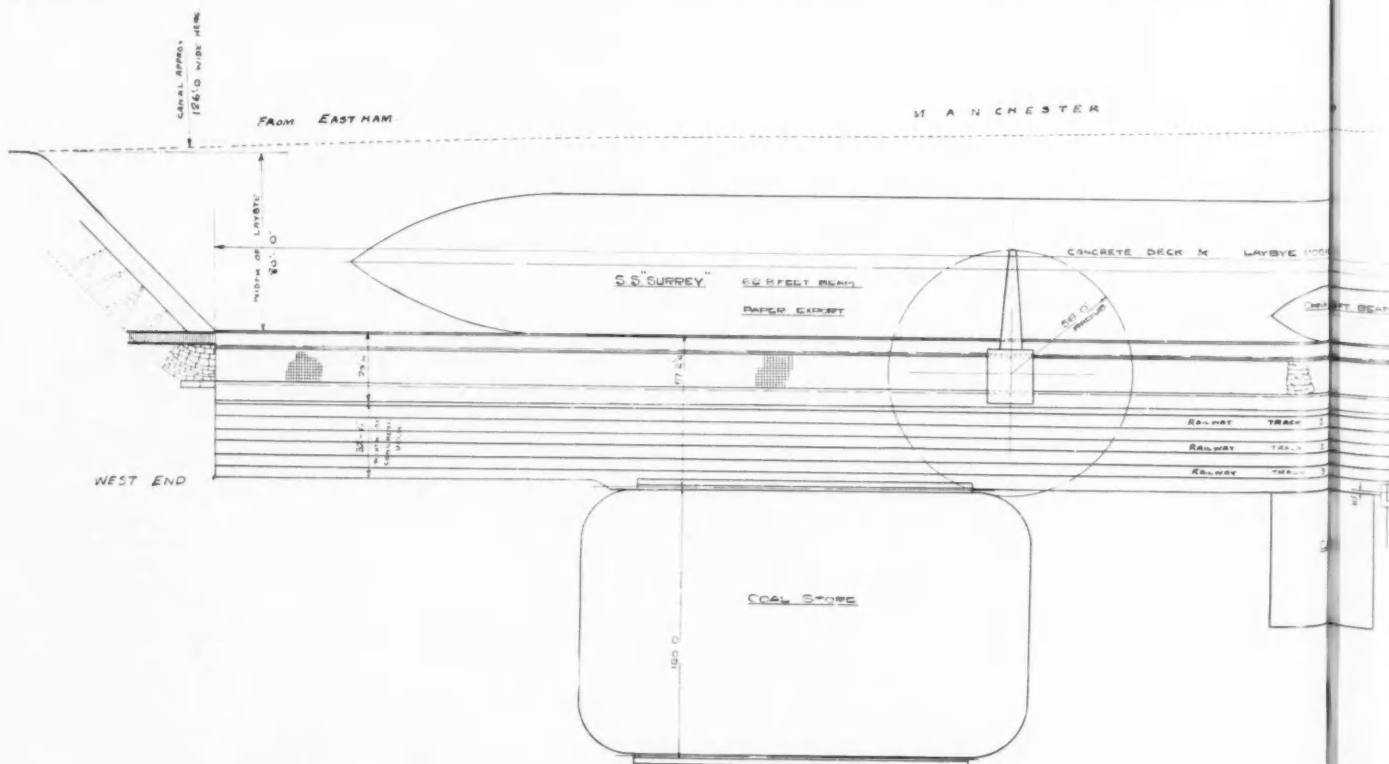


Ellesmere Port Lay-bye and Bowater

ELLESMERE PORT, which is situated three miles distant from the Eastham entrance to the Manchester Ship Canal, has made a remarkable advance towards industrial eminence in the last two decades. It is a strategic point where has become congregated a group of basic industries, all of them with vast potentialities. At Stanlow, for instance, a mile above Ellesmere Port, the docking facilities for tankers were greatly extended in 1933, resulting in

extensive additions being made to the park of petrol storage tanks and the creation of a volume of spirit traffic, second only to London.

Just about the time of the completion of the Stanlow Dock, a start was made on the work of building a new wharf and laybye for Bowater's Mersey Paper Mills, Ltd. Their mill, which is devoted exclusively to the production of newsprint, commenced production in 1930, and is perhaps the most



ment : *Bowater's Mersey Paper Mills*

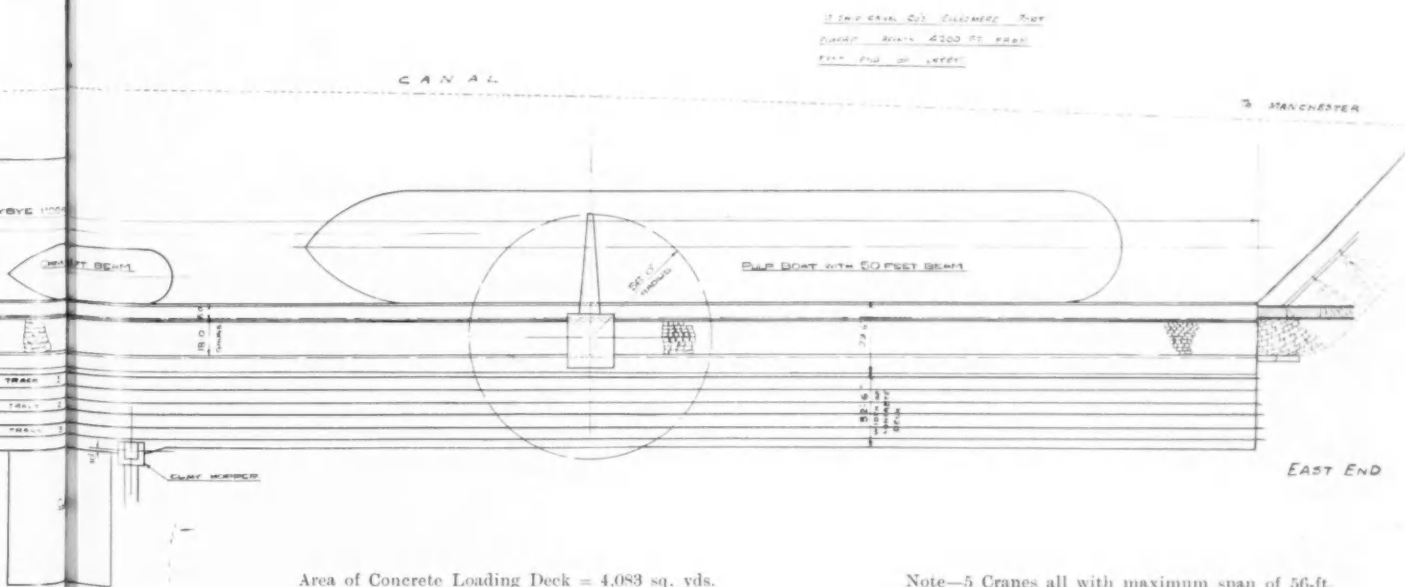


ye and Bowater's Mersey Paper Mills.

modern and most efficient newsprint mill in England, or indeed, abroad. So as to handle as economically as possible, the large tonnage of raw material inwards, plus that proportion of the output of finished paper which is exported, the Company decided to construct a private wharf adjoining their plant, at a cost of approximately £150,000 (including equipment). Before this, wood pulp and china clay were discharged from steamers further up the canal and rail-hauled to the mill.

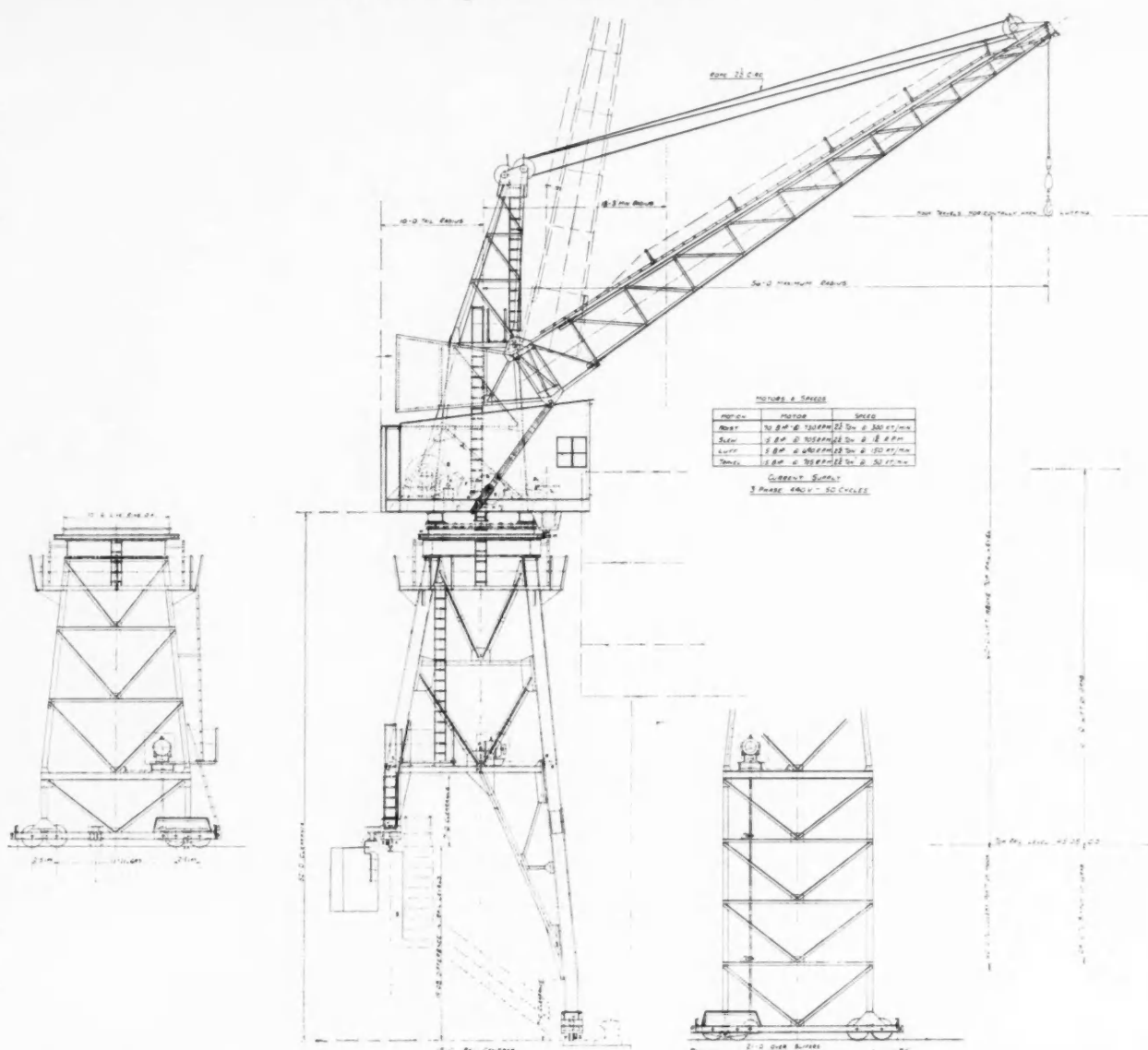
As the works are operated on a continuous three-shift system, the consumption of raw material—and the output—is enormous. The import of wood pulp alone exceeds 200,000 tons per annum, while the best day's unloading since the opening of the wharf amounted to over 1,500 tons in 7½ hours, using only four of the five wharf cranes.

The site of the wharf and layby is two miles from the entrance to the Ship Canal. Bowater's have a



Plan of Bowater's New Wharf at Ellesmere Port.

New Wharf at Ellesmere Port—continued



General Arrangement Drawing of 2½-ton Portable Electric Crank Level Luffing Crane installed on Bowater's New Wharf at Ellesmere Port.

frontage of 1,965 ft., the wharf occupying 1,100 ft. and the layby 1,280 ft. The ends of the wharf are splayed to join the south bank of the canal. There is a 30-ft. depth of water under all conditions, and the largest vessels using the canal can be safely berthed.

For the construction of the wharf and layby, Bowater's brought into consultation Mr. H. A. Reed, M.I.C.E., of the Manchester Ship Canal Company, who, in conjunction with Mr. G. W. Shaw, chief engineer of the Bowater Companies, prepared the designs, and the constructional contract was allotted to Sir Robert McAlpine and Sons (Midlands) Ltd. Mr. J. C. Martin, M.I.C.E., sectional engineer of the Manchester Ship Canal, supervised the carrying out of the work, which was commenced on 8th October, 1933, day and night shifts being continuously employed in preparing the site until March, 1934.

As the mill ground level is 33 ft. above the normal water level in the canal, two decks are arranged at the wharf, the lower one 13 ft. above the water level, on which the bollards for mooring are fixed, and a higher level on which the railway tracks are arranged. The higher deck is at practically the same level as the mill site, so that the railway trucks to and from the mill are very easily hauled by the fireless locomotives. The two decks are connected by a sloping bank, down which access stairways are conveniently arranged. The legs of the semi-portable cranes (by Stothert and Pitt, of Bath) are astride the wharf.

The general level of the site was 45.00 ft. ordnance datum, or 33 ft. above the ordinary water level. The average rock level was about 25.00 ft. ordnance datum, this being covered by about 18 ft. of clay and soil.

The excavation in sandstone rock was done to a depth of minus 18.50 ft., so that a depth of 43.50 ft. of rock had to be cut away. The set-back from the canal at one end was 78 ft. 6 ins., in the middle 88 ft., and at the other extremity 87 ft., the average depth being 84.6 ft.

The majority of the excavation was in the red sandstone, of which nearly four million cubic feet were removed and two million cubic feet of earth in addition. The majority of the excavations were taken by railway into a valley adjacent to the mill. The soft material overlying the rock was removed before the main excavation work was undertaken and a slope was formed ready for pitching, a Ruston drag-line (2½ bucket) being used for the purpose.

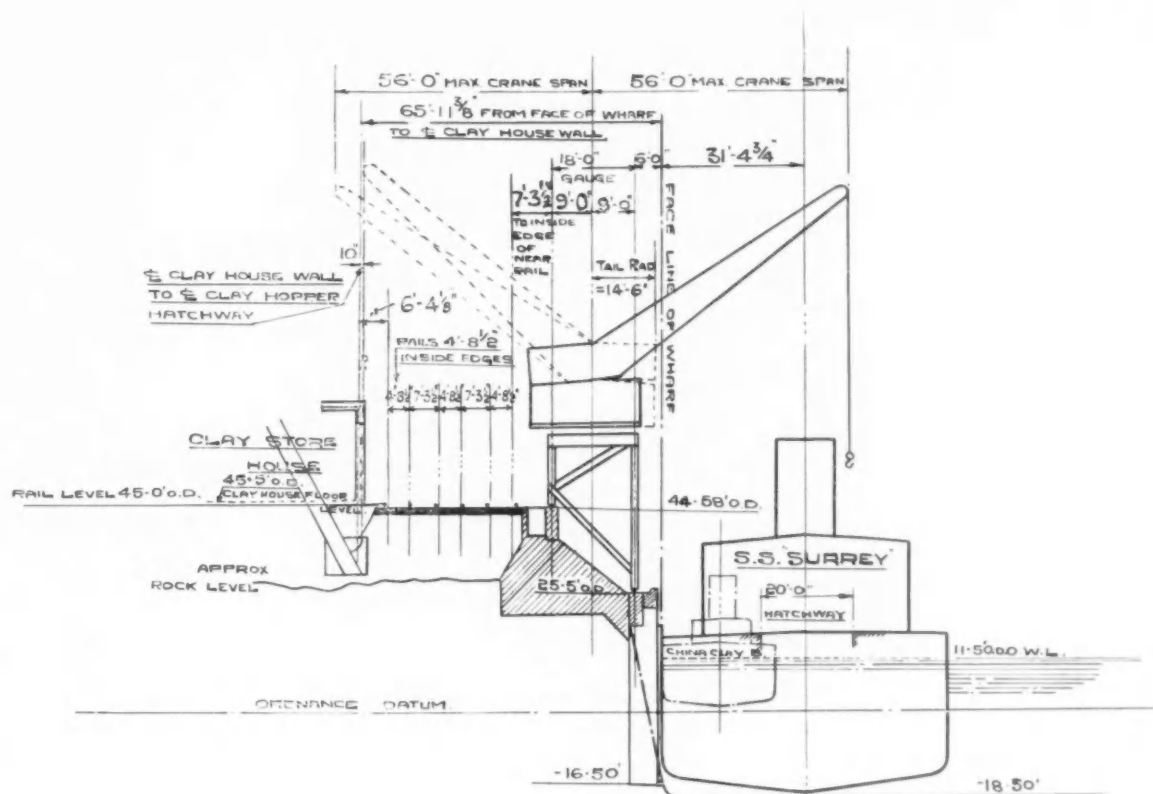
The major portion of the excavation was carried out in the dry, a coffer dam of rock being left between the canal and the layby. The work was done in two halves, sheet piling forming a cross dam dividing the layby into two; the eastern half was completed first and was actually used by shipping during the completion of the second half. In the initial stages of the operations no blasting was employed, and the site was bisected with a trench to insulate the main part of the work from disturbance, when subsequently gelignite was used. This trench was cut to a width of 9 ft. at the top, 3 ft. at the bottom, and the depth 23.50 ft. After the trench had been cut to a length of 200 ft., the main rock excavation was commenced, the rock at the canal side being broken up by blasting, a drag-line being used to remove the spoil.

Work then proceeded to the full depth of the wharf bottom, and this enabled the concrete piers to be formed.

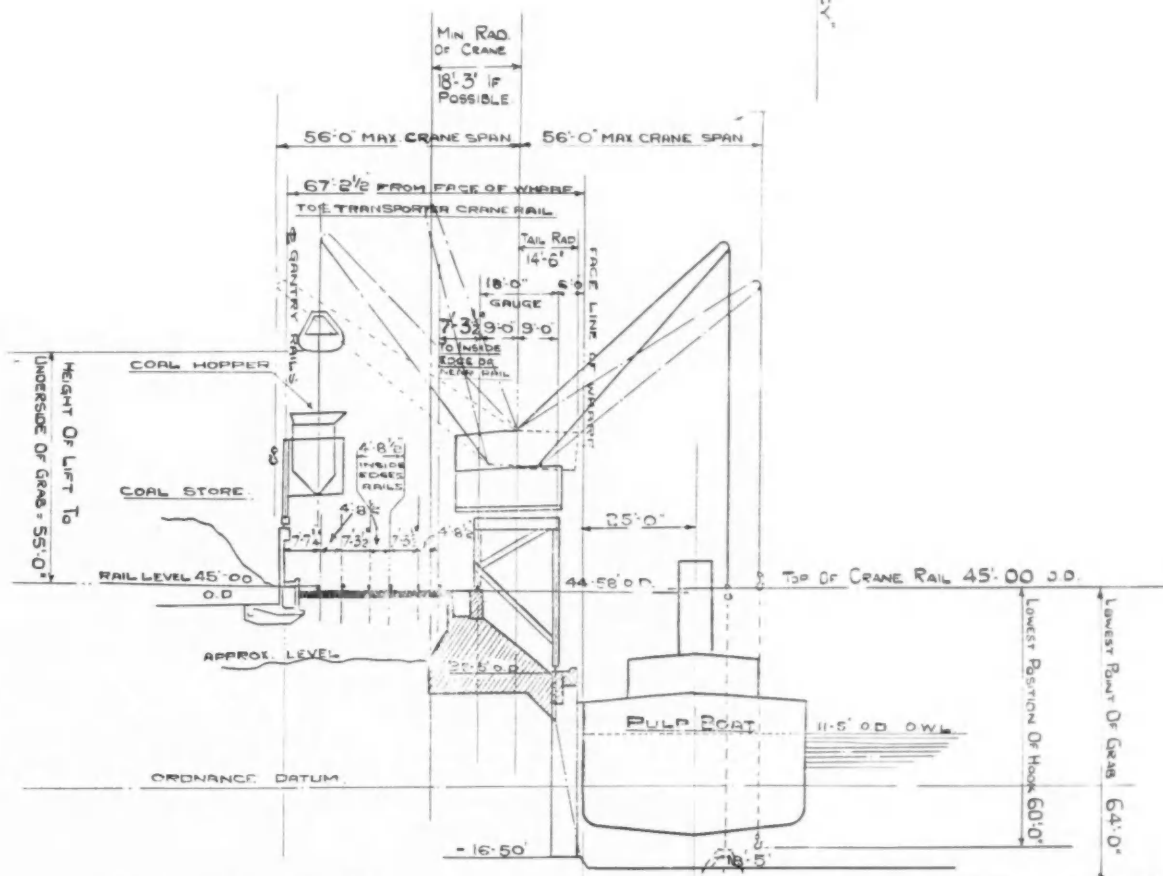
After the excavation was completed, the coffer dam parallel to the canal was removed in stages, the first lift being 8 ft. The rock was removed by blasting, a Priestman's grab travelling on the top of the coffer dam. Then the Manchester Ship Canal Company's rock breaker was put into service. This rock breaker, which has a 12-ton needle, is 38 ft. long and punches holes with 4 ft. centres to a depth of 5 ft. Altogether, there was a depth of 30 ft. of rock to break, the width of the dam at the bottom being about 40 ft. There were five operations in rock-breaking and dredging.

As is usual in the carrying out of such contracts, there were one or two nasty patches that occasioned some anxiety, but,

New £150,000 Wharf at Ellesmere Port



CROSS SECTION THROUGH
WHARF AT CHINA CLAY HOUSE
SHOWING CRANE IN POSITION
OVER PAPER EXPORT BOAT &
CHINA CLAY HOPPER



CROSS SECTION OF WHARF
AT PULP BOAT & COAL STORE
SHOWING CRANE IN POSITION
OVER PULP BOAT & COAL HOPPER

New Wharf at Ellesmere Port—continued

with the exception of one fault which occurred in the middle of the wharf, no trouble was encountered. Where this fault occurred it was necessary to excavate to a greater depth and to widen the several piers in that part of the wharf.



View of the New Wharf showing the Five $2\frac{1}{2}$ -ton Cranes.

The wharf is constructed of reinforced concrete counterforts on piers carried down below the level of the bottom of the lay-by, the counterforts being arranged every 33 ft. and keyed into the red sandstone. Reinforced concrete beams at both the lower and upper deck levels connect the counterforts, and the splayed bank is cut out of the solid sandstone and pitched with even pieces of stone. The parts which span the piers have a back beam as large as 7 ft. deep by 2 ft. 6 ins. wide, these being used to carry the crane rail.

Between the piers there has been constructed a reinforced concrete wave wall to protect the surface of the rock from erosion, this wave wall being carried down to a liberal depth below the ordinary water level in the Ship Canal, as a precaution and a preventative against damage to the rock face. The top deck of the wharf is of concrete, carried on a broken rock foundation.

Thirty-four piers of varying dimensions are constructed, the main ordinary piers being 5 ft. wide and 6 ft. deep in the rock face. Every sixth pier is made wider and is divided in the centre so as to function as an expansion joint. The piers themselves are reinforced with vertical $1\frac{1}{2}$ -in. rods, with $\frac{1}{2}$ -in. diameter stirrups at 2-ft. centres. The expansion piers have sixteen vertical rods each and the ordinary piers ten vertical rods each. The piers extend to a depth of 43.50 ft., 13 ft. being the height of the wharf and 20.50 ft. the depth below the water level.

The piers were first formed and tied in a back buttress cut into the rock to a distance of 35 ft., i.e., beyond the face of the wharf. The buttress to each pier was taken down to hard rock levels and extended to a height of 22 ft. to form a support for the upper crane beam and the electric cable trench for the three live wires.

The distance of the upper crane beam from the wharf face is 24 ft., and the gauge between the two crane rails is 18 ft., the distance between the upper and lower levels being 19 ft.

The wharf has been sufficiently supplied with bollards, there being one on every other pier.

Five $2\frac{1}{2}$ -ton portable electric crank level luffing cranes were supplied by Stothert and Pitt, of Bath, these being arranged to travel the full length of the wharf, one crane rail being on the beam of the lower deck and the other on the upper deck beam. Each can be used with dumping grab suitable for dealing with small coal or china clay, and a cargo hook has been provided to enable bales of pulp, reels of paper, and general cargo to be handled. China clay can be picked up with a grab in a ship's hold and deposited direct in the mill store. The cranes are specially designed with a very small tail radius, so that two cranes can work back to back on the same hatch of even a small ship.

The leading particulars are as follow:—Maximum working load, $2\frac{1}{2}$ tons; maximum radius, 56 ft.; total height of lift,

122 ft.; centres of track rails, 18 ft.; difference in rail levels, 19.08 ft.; current 3 phase 50 periods 440 volts.

Current is supplied to each crane by three roller collectors running on live rails placed in a conduit. The conduit is covered by plating and provided with a slot through which the collector arm passes. Speeds:—Hoisting, $2\frac{1}{2}$ tons at 300 ft. per minute; slewing, $2\frac{1}{2}$ tons at $1\frac{1}{2}$ revs. per minute; luffing, $2\frac{1}{2}$ tons at 150 ft. per minute; travelling, $2\frac{1}{2}$ tons at 50 ft. per minute.

The hoisting motion is operated from a 70-h.p. motor, by means of single reduction spur gearing, the automatic brake on this motion being operated by means of a B.T.H. thruster. The hoisting barrel is fitted with a brake controlled by a foot-lever from the driver's position.

The slewing motion is actuated by a 15-h.p. motor through worm gear driving a vertical shaft on which is keyed a steel pinion meshing into a fixed pin rack.

The luffing motion is operated by a 5-h.p. motor by means of spur gearing, which actuates the horizontal cross shaft, in the end of which are keyed the cast-steel cranks for luffing the jib. The jib is balanced, and the Stothert and Pitt patent system of reeving the hoist rope and fixing the position of the lead off pulleys, ensures that the rise and fall on the rope suspended from the jib-head is compensated when the jib is luffed in or out. With this system the load moves in a horizontal path, and consequently no work is performed against gravity, only frictional and wind resistance being overcome. The brake provided for the luffing motion is operated by a B.T.H. thruster.

The travelling motion is driven by means of a 15-h.p. motor through spur and bevel gearing, the crane being mounted on eight travelling wheels, four of which are driven. A B.T.H. thruster operated post-type brake is embodied.

Electricity, produced in the Bowater mill, is supplied to the cranes by a live rail arranged in a trench (6 ft. deep and 3 ft. 6 ins. wide) adjacent to the top crane rail, in which trench three steel rails copper-clad, of tee section, are mounted. A stout steel cover protects the whole collector gear above ground level; this method of electricity supply obviates the long lengths of trailing supply cable. The trench is of such a depth and width that a man can do maintenance work comfortably without removing the chequered plate covers.



Another View of the Wharf and Five $2\frac{1}{2}$ -ton Cranes.

On one side of the trench the live rails are arranged and wire-mesh guards are fitted. The collector arms are so arranged that the continuous slot in the chequered plate cover is not directly above the live rails, so that any material dropping between the slot cannot drop between the live rails and the guards. On the other side of the trench lighting cables and drinking water supply piping is mounted. The latter supply is carried down to the lower deck, where suitable hose connections are arranged for the filling of ships' tanks.

New Wharf at Ellesmere Port



Mechanical Digger at Commencement of Operations.



Construction of Wharf Piers.



Mechanical Digger removing Top Earth prior to Rock Excavation.



Wharf Piers partly constructed and Excavations and Shuttering for Counterforts.



Excavation of Safety Trench between Lay-by Excavations and Site of Wharf.



East Half of Wharf and Lay-by showing Main Coffor Dam.

New Wharf at Ellesmere Port—continued

Lighting standards are arranged on the upper deck, and lights are also carried from the sloping bank of the wharf so that work may proceed day and night if required. In addition, the cranes are fitted with suitable projecting lights, and connections are arranged on the lower deck so that ships may connect their lighting system in the event of their own generating equipment not being in operation.



Wharf Piers and Wave Wall completed immediately prior to admission of Water to East Half of Lay-bye.

Fire hydrant connections are arranged at intervals along the top deck. Adjacent to the top deck, wharf offices and stores are arranged, with accommodation for a large number of stevedores, with lavatories for ship's officers and men.

There are three rows of railway tracks on the top deck, a system of switches and run-outs being arranged to facilitate the flexible working of the railway trucks. The railway tracks are connected at several points to the paper mills' internal railway system, and at the east end to the Manchester Ship Canal Company's railway system, which, in turn, is connected to the L.M.S. Railway.

The railway tracks on the top deck of the wharf are arranged flush with the deck, so that road vehicles may traverse the deck.

Sandstone filling is used for the slope between the upper and the lower wharf, this having a concrete mat.

Ample drainage is provided for both the upper and the lower wharf these being also served by fresh water hydrants.



View from East to West showing Concrete Wharf prior to Construction of Railway Deck.

The principal items of plant used were:—A 75 Ruston drag-line steam navvy, a 4 Ruston petrol navvy, two 5-ton steam travelling cranes, five 13-in. steam locos, nine 12 cub. yds. Yankee dump wagons, five 50-h.p. Alley and McLellan air compressors with motors, two miles 4 ft. 8½ in. gauge service road track, and a Lobnitz rock breaker. The Manchester Ship Canal Company's bucket dredger "Gowry" (by Fleming and Ferguson) was also used.

The dredged material was deposited into skip barges of 100 tons capacity, the rock material being deposited at Stanlow. About 35,000 cub. yds. of rock were dredged. Soft excavation amounted to 62,000 cub. yds. and rock excavation about

160,000 cub. yds. With the exception of 12,000 cub. yds., which was removed by hand, all the other rock was blasted.

Materials used included 6,400 cub. yds. of concrete and 6,100 cwt. of steel bars.

Four different classes of concrete mix were employed:—Class I: 27 cub. ft. aggregate, 13½ cub. ft. sand and 694 lbs. cement; Class II: 27 cub. ft. aggregate, 13½ cub. ft. sand and 608 lbs. cement; Class III: 27 cub. ft. aggregate, 13½ cub. ft. sand and 486 lbs. cement; Class IV: 27 cub. ft. aggregate, 13½ cub. ft. sand and 405 lbs. cement.

The aggregate, sand and gravel, came from Gresford and the steel from the Whitehead Iron and Steel Co., Newport (Mon.).



Removal of Top of Main Dam to allow sufficient Depth of Water for Floating Rock Breaker.

Summary of Progress of Work.

Preparing the site:—Start made in October, 1933, and continued until March, 1934.

The whole of the excavation in the dry was completed in the upper half (between the middle dam) and was flooded on 12th May, 1934. A start was then made to lower the coffer dam. This was lowered, in the first place, to an average depth of 8 ft. below the level of the canal to enable the rock breaker to start work.

The rock breaker commenced operations on 18th June, and dredging commenced early in July. In the meantime, work proceeded on the lower half, which was flooded on 17th August, enabling dredging operations to be continued here. The first steamer was berthed at the wharf to discharge cargo on 4th November, 1934.

The construction of the wharf was completed, with the exception of minor equipment, by 20th November, 1934. Dredging was completed by 3rd May this year.

Bombay Port Trust

At a meeting of the Trustees of the Port of Bombay held on 21st May, 1935, the following were the main items of business disposed of:—

A Government Notification was recorded appointing Major-General J. H. F. Lakin, C. B., C. S. I., a member of the Board of Trustees in place of Major-General H. Needham, C. B., C. M. G., D. S. O., retired.

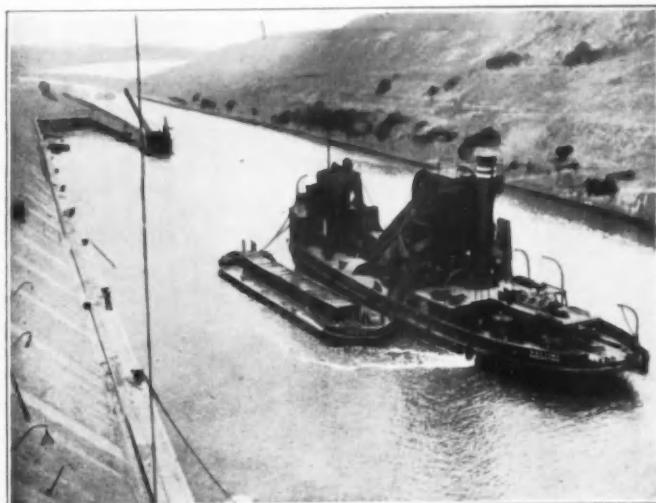
Amendments of the Docks Scale of Rates were approved, subject to the necessary sanction of Government, reducing the hire charges for Docks iron tubs, used for loading and discharging bulk cargoes, and Docks wharfage on Polishes shipped to and from West Coast ports.

The Board considered a draft scheme for future Port Sanitary Administration prepared by the Government of India, involving the constitution of Port Sanitary Authorities in each of the Major Ports with the object of co-ordinating and bringing under a single authority all such matters as quarantine, deratisation, anti-malarial measures and conservancy, which under present arrangements are under different jurisdictions, or else under divided control. The Board expressed general approval of the scheme provided it entails no greater expenditure than is at present incurred by the Trust on port sanitary measures.

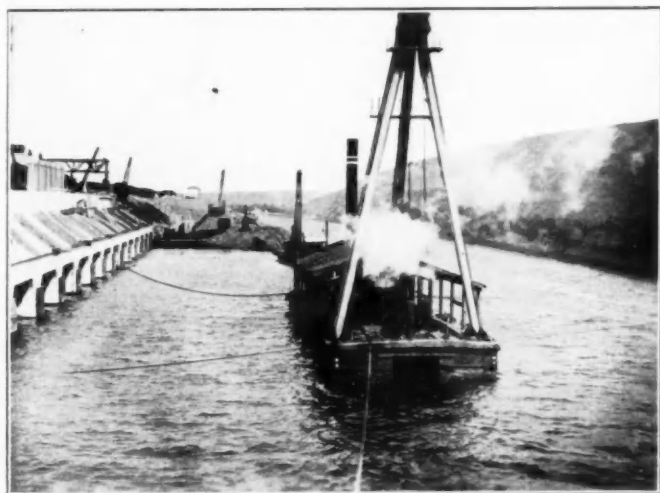
New Wharf at Ellesmere Port



Top Wharf Deck showing Cable Trench prior to Covers being fitted.



Removal of Broken Rock by Bucket Dredger.



Removal of Main Cofferdam by Floating Rock Breaker.



View from Crane Cab showing Railway Deck and Cable Trench.



East Half of Lay-by showing Steel Sheet Piled Cross Dam.



Berthing of First Ship to enter Wharf.

Shipping and Cargo Traffic at Continental North Sea Ports in 1934

THE Department of Overseas Trade is informed by H.M. Consul-General at Hamburg that the Hamburg Trade and Statistical Office has published comparative figures for the year 1934 of the shipping and cargo traffic at the four principal North Sea Continental ports of Hamburg, Antwerp, Rotterdam and Bremen.

The increased purchases of raw material by Germany was reflected in the larger volume of primary products handled at all four ports. Hamburg maintained its leading position as regards the tonnage of sea-going shipping using the port, but Rotterdam again led the way in the handling of cargoes, particularly shipments of mass goods, with 25.9 million tons, as compared with Hamburg's 20.3 million tons, Antwerp's 18.8 million tons, and Bremen's 6.1 million tons.

All ports showed appreciable increases in the total volume of cargoes (inward and outward) handled in 1934, as compared with the previous year, viz.:—

	1933 (1000 metric tons)	1934 (1000 metric tons)	Increase Tons	Percentage
Hamburg	19,580	20,303	723	3.7
Antwerp	17,345	18,824	1,479	8.5
Rotterdam	22,151	25,878	3,727	16.8
Bremen	4,715	6,123	1,408	29.9

Shipping traffic (in 1,000 net register tons) entered at the four ports during the past two years, compared with the previous best year (1929) was as follows:—

	1934	1933	1929
Hamburg	18,484	17,822	21,965
Antwerp	17,454	17,375	20,676
Rotterdam	17,974*	15,296	21,545
Bremen	7,939	7,236	8,652

Rotterdam thus showed the largest increase in the tonnage using the port with 2.7 million tons, or 17.5 per cent., followed by Hamburg and Bremen, each with an increase of approximately 0.7 million tons, or 3.5 per cent. and 9.7 per cent. respectively. Antwerp's traffic remained about the same. The figures for Hamburg, Rotterdam and Antwerp represented 84 per cent. of the previous best record of 1929, while Bremen reached 92 per cent. of its previous best.

The following figures show the volume (in 1,000 metric tons) of cargoes handled during the past three years:—

TOTAL INWARD CARGOES.

	1934	1933	1929
Hamburg	14,009	12,920	18,803
Antwerp	10,681	10,048	12,442
Rotterdam	16,004	13,786	22,948*
Bremen	2,801	2,589	4,031

Excluding Coal and Ore.

	1934	1933	1929
Hamburg	11,113	10,205	14,275
Antwerp	8,575	8,302	8,885
Rotterdam	10,627	10,185	10,980*
Bremen	2,639	2,492	3,270

* Excluding Pernis and Vondelingenplaat.

The larger inward shipments of raw material was responsible for the increase of 2.2 million tons, or 16.1 per cent. at Rotterdam, 1.1 million tons, or 8.4 per cent. at Hamburg, 0.2 million tons, or 8.2 per cent. at Bremen, and 0.6 million tons, or 6.3 per cent. at Antwerp.

While at Hamburg and Bremen there was an all-round increase in the most important classes of raw materials, the larger cargoes at Antwerp and Rotterdam were chiefly ores, mineral oils and timber, destined for the Ruhr industrial area. The imports of foreign bread grain at the Rhine estuary ports fell as a result of the German grain policy, but shipments of German grain by water and foreign feeding grain to Hamburg and Bremen were higher. The decline of American imports of cotton into Germany chiefly affected Bremen; Hamburg, on the other hand, received larger consignments of cotton from other sources. In spite of the increase in the shipping tonnage using the ports of Rotterdam and Bremen, the volume of inward cargoes only reached 70 per cent. of the previous record year of 1929; Hamburg reached 75 per cent. and Antwerp 86 per cent. The favourable development in the case of Antwerp is ascribed to the effect of the Belgian Rhine shipping premium.

Outward cargoes (in 1,000 metric tons) were as follows:—

TOTAL (not including Ships' supplies).

	1934	1933	1929
Hamburg	6,294	6,660	9,771
Antwerp	8,143	7,297	11,998
Rotterdam	9,874	8,365	13,546*
Bremen	3,322	2,126	2,435

Excluding Coal and Ore.

	1934	1933	1929
Hamburg	6,146	6,526	9,651
Antwerp	7,388	6,640	11,646
Rotterdam	2,860	2,721	4,363*
Bremen	1,859	1,546	2,398

* Excluding Pernis and Vondelingenplaat.

At all ports, with the exception of Hamburg, outgoing cargoes were larger, viz.: Bremen, 1.2 million tons, or 56.3 per cent.; Rotterdam, 1.5 million tons, or 18 per cent.; and Antwerp, 0.8 million tons, or 11.6 per cent.

The increase in the case of Rotterdam was principally due to the larger transshipments of Ruhr coal, while Antwerp shipped larger quantities of metal goods. The larger cargoes consigned from Bremen were due to increased shipments of coal and metal ware from the Ruhr industrial area and the extent to which the Weser Port of Bremen and the Rhine Estuary ports are dependent upon the West German heavy industries, is clearly illustrated by the returns from these ports. Special consideration was given to Bremen in diverting, by means of special transport rates, a larger share of coal and industrial products for export to the Weser port. Hamburg, on the other hand, depends to a greater extent upon the German agrarian districts and the adjoining agricultural countries of Northern and Eastern Europe for its outward cargoes. Consequently, the reduced shipments of German grain and the loss of foreign grain transshipment business as well as reduced exports of German and Czechoslovakian (in transit) sugar accounted almost exclusively for the decline of 0.4 million tons, or 5.5 per cent., in the outward volume of cargoes shipped from the Elbe port. Compared with the previous best figures of 1929, exports from Hamburg and Antwerp reached 64 per cent., and from Rotterdam, 73 per cent. of the totals for that year. Bremen exceeded the 1929 total by 36.4 per cent. If coal shipments are excluded, however, Bremen's total in 1934 represented 78 per cent. of the 1929 figure, and Rotterdam's, 66 per cent.

The following figures show the monthly cargo returns of the four ports for 1934, and the average monthly figures for the past three years:—

INWARD SEA-BORNE CARGOES (in 1,000 metric tons).

1934	Hamburg	Antwerp	Rotterdam*	Bremen
January	1,124	875	1,026	225
February	1,039	808	1,023	179
March	1,212	821	1,220	209
April	1,162	866	1,266	253
May	1,223	829	1,743	276
June	1,038	888	1,595	230
July	992	861	1,555	268
August	1,034	964	1,373	205
September	1,077	1,030	1,233	254
October	1,223	925	1,562	228
November	1,381	876	1,203	189
December	1,504	934	1,204	286
Monthly Average				
1934	1,167	891	1,334	233
1933	1,077	837	1,149	216
1932	1,079	777	1,014	220

OUTWARD SEA-BORNE CARGOES (in 1,000 metric tons).

1934	Hamburg	Antwerp	Rotterdam*	Bremen
January	560	628	500	261
February	489	522	755	242
March	590	674	905	220
April	550	685	660	263
May	522	635	886	284
June	493	608	906	197
July	418	610	738	257
August	486	627	851	268
September	562	779	892	347
October	515	833	862	354
November	556	832	987	338
December	554	711	933	292
Monthly Average				
1934	525	679	823	277
1933	555	608	697	177
1932	573	544	661	140

* From May the cargo traffic at Pernis and Vondelingenplaat is included. The average monthly figures for 1933 and 1934 also include the traffic for these two adjoining places.

North-East Coast Notes

Course of Tyne Trade.

THE Docks and Trade Committee reported that the quantity of coal and coke shipped in April was 1,033,888 tons, against 1,084,681 tons in April last year, a decrease of 50,793 tons. In April, 1913, the total was 1,686,472 tons, or 652,584 tons more than last month. In the first four months of this year the shipments were 4,442,020 tons, compared with 4,740,305 in the corresponding period of last year, a decrease of 298,285 tons. The decrease, compared with the first four months of 1913, was 2,006,265 tons. The bunker coal shipments this year were down 123,346 tons. On the other hand, oil fuel bunkers were better. In the past four months 70 vessels took 12,540 tons, compared with 54 vessels and 5,689 tons in the corresponding period of last year, an increase of 16 vessels and 2,851 tons. In the first quarter of this year general merchandise imported into the Tyne totalled 353,497 tons, or a net decrease of 68,193 tons on the opening three months of last year. The chief decreases were in wheat, iron ore, metals, timber and wood pulp. Exports showed up better. The total was 83,431 tons, or an increase of 5,938 tons on the first quarter of last year. The leading increases were in tar, pitch and resin, iron manufactures and sulphate of ammonia.

The Lord Mayor (Mr. R. S. Dalgliesh) said the decrease in coal and coke shipments was nearly all overseas trade, and more than half was at the Commissioners' docks and staiths. Of the total decrease 91,000 tons was in respect of bunkers for direct use. The percentage decrease in April was less than in the first quarter of the year, and this seemed to indicate that the rate of decline had been arrested. Coke shipments had improved to Denmark, Finland, Germany, Norway, and Lithuania. Coaling station bunker trade was up 102,000 tons in four months, but there were fewer ships leaving the Tyne in ballast, and it had also to be remembered, that vessels trading to Russia were compelled to take at least part of their bunkers in Russian coal at Russian ports.

Broadcast of River Activities.

At the same meeting of the Commission, the Chairman said he had received many messages of congratulation, not only from local sources, but from distant parts of the country, on a recent broadcast by the B.B.C., of the river's activities. Describing the preparations for the broadcast, he said he was surprised to find that many of the sounds which listeners heard were the results of records taken days before. "What surprised me most," said Mr. Everett, "was that the taking of the records was at a cost of £1 per minute. The broadcast was excellent propaganda for the Tyne," he added. The Board, on the proposal of the Chairman, expressed its thanks to the B.B.C. for the unqualified success of the broadcast.

Quick Loading Achievement.

A very quick-loading achievement was completed at Pelaw Main staiths on May 22nd, when the steamer "Essex Lance" took on board a cargo of 8,200 tons of coal in 30½ hours.

Tyne Dock and Jarrow Slake Negotiations.

At the time of writing, no decision had been reached as to the negotiations between the Tyne Commission and the London and North-Eastern Railway respecting Tyne Dock and Jarrow Slake. In June, a rumour was current that the London and North-Eastern Railway had rejected the plan to sell Tyne Dock to the Tyne Improvement Commission, but when approached Sir Ralph Wedgwood declined to converse on the matter at all, simply intimating that there was no statement to be made.

Blyth, Wear and Tees Shipments.

At the May meeting of the Blyth Harbour Commission, Mr. Ridley Warham, chairman, submitted particulars of the coal shipments during the four months ended 30th April with comparative figures for 1934 and 1929. The figures were: 1935, 2,061,496 tons; 1934, 2,109,677 tons; 1929, 1,780,533 tons. The totals show a decrease of 2 per cent. on 1934, and an increase of 16 per cent. on 1929.

The latest trade figures for the Port of Sunderland cover the period to the end of April. These show coal and coke shipments totalled 1,284,735 tons, against 1,365,053 tons in 1934. Other exports totalled 14,620 tons, against 19,013 tons in 1934. Imports aggregated 78,667 tons, compared with 77,169 tons in 1934. It is noteworthy that iron ore cargoes at 18,024 were just double those of last year. Timber and props at 9,346 loads were 127 loads below the figure for the same period of 1934. Petroleum at 26,185 tons, compared with 27,764 last year.

A very marked increase in the imports of iron and steel into the Tees from abroad during May was reported to the June meeting of the Conservancy Commission. The total of 4,778 tons is the second largest since last November, and compared with 1,844 tons in April, and 6,243 tons in November. During the past seven months 29,105 tons have been imported, as against 25,633 tons for the corresponding period in 1933-1934. Nearly 14,000 tons less iron and steel was shipped from the River Tees ports in May than in April, the aggregate clearances being 41,685 tons, against 55,471 tons, and 54,912 tons in May, 1934. This substantial decline is due principally to a fall in the export shipments of manufactured steel. May shipments of manufactured steel were 29,870 tons, compared with 41,500 tons in April, exports amounting to 19,253 tons and coastwise clearances to 10,617 tons.

Port of Southampton Topics

Docks Extension Scheme nearing Completion.

The past month has seen the completion of several more stages of the new Docks scheme at Southampton.

The two last pairs of passenger and cargo sheds have been completed and are now ready for use. With the finishing of this work the whole of the passenger and cargo accommodation at the new Docks is supplied.

Work is now progressing on a new train warming and cleaning shed, which is being built at the rear of the second pair of passenger sheds.

Boat trains are now able to connect with the new Docks not only from the town-end of the Docks Estate, but also by new lines laid down from Millbrook at the western end.

Docks Statistics for May show all-round Increases.

A definite indication that trade in Southampton Docks is on the up-grade is gathered from the returns for May, increases being recorded under every heading of port activity. This is the second successive month that has shown all-round increases, compared with the corresponding months of 1934.

Vessels inward totalled 272, as compared with 266 in May last year, and outward there were 275, as against 263. This total increase of 18 ships was reflected in the tonnage returns. Gross tonnage inward amounted to 1,674,902 tons, which was 45,483 tons more than in May, 1934, when the figure was 1,629,419

tons. Similarly, the outward total of 1,591,542 tons was 141,092 tons in excess of the 1,450,450 tons during the corresponding period in the previous year.

Net tonnage figures showed an increase of 69,949 tons inward and 110,987 tons outward, the actual returns being 906,741 tons inward, as compared with 836,792 tons, and outward 861,145 tons, as against 750,158 tons.

The most astonishing increase of the series of figures is that in respect of cargo handled. Imports during the month totalled 56,463 tons, which was 17,204 tons more than in May last year, when the return was 39,259 tons. The main reason for the increase was that there were many more cargoes of grain from all parts of the world landed here, and also heavy consignments of bananas from the West Indies.

Exports were 5,292 tons higher, the figure being 32,027 tons, as compared with 26,735 tons.

In view of the great interest in the cargo traffic of the port it is interesting to recall that not only are the May figures up, but the April figures also showed substantial increases in imports and exports, compared with April, 1934.

Highly satisfactory passenger figures are also contained in this series of statistics. Arrivals during May numbered 22,176 persons, as compared with 17,143 in May, 1934, and departures 17,893, compared with 16,394. The respective increases were therefore 5,033 and 1,499.

Again, it is interesting to recall the April figures, which showed increases of over 5,000.

The Port of Bristol: Twenty-five Years of Progress

THE year 1910 marked the opening of a new era for the Port of Bristol, and the 25 years of His Majesty's reign have proved to be the most eventful in the history of the port.

His Majesty, as Prince of Wales, cut the first sod of the Royal Edward Dock in 1902. The dock was opened by his father, H.M. King Edward VII., in 1908, and it was again associated with the Royal Family in 1928, when H.R.H. The Prince of Wales opened an extension, which added 16 acres to the dock.

In every respect the progress during the past 25 years can be regarded as satisfactory. The occasion is particularly opportune to review the progress of the port as 50 years of unified ownership of the Dock Undertaking by the Corporation of Bristol has just been completed. The citizens have long had the distinction of being owners of the largest municipal dock undertaking in the country.

In the year 1885, when the Corporation assumed the ownership of the Avonmouth and the Portishead Docks, the capital expenditure was less than 1½ million pounds, and the net revenue was about £35,000. The progress made during His Majesty's reign is shown below:—

	1910	1935
Capital	£ 6,150,000	£ 9,215,000
Gross Revenue	267,000	786,000
Net Revenue	95,500	281,000
Rate-in-Aid	154,000	40,000
Accumulations in Sinking Funds	470,000	3,000,000

Between 1885 and 1910 nearly £5,000,000 were spent on new works, the principal being the construction of the Royal Edward Dock at Avonmouth.

During the last 25 years to 1935 over £3,000,000 have been spent on new works, the Net Revenue has increased threefold, whilst the demand upon the local rates has been reduced from £154,000 to £40,000, and there is now £3,000,000 in the Sinking Fund for the redemption of loans.

The extent to which trade has responded to the provision of efficient accommodation and equipment is shown by the following figures:—

TONNAGE OF VESSELS.

	1885	1910	1935
Foreign (Tons)	590,000	1,400,000	2,600,000
Coastwise (Tons)	670,000	750,000	850,000
	1,260,000	2,150,000	3,450,000

TONNAGE OF IMPORTS.

	1885	1910	1935
Foreign (Tons)	820,000	1,500,000	2,500,000
Coastwise (Tons)	750,000	890,000	950,000

The following figures show how the principal imports have increased:—

	1885	1910	1935
Grain (Tons)	420,000	680,000	900,000
Feeding Stuffs for livestock (Tons)	40,000	10,000	160,000
Petroleum Spirit (Tons)	Nil	10,000	500,000
" " (other kinds) (Tons)	12,000	85,000	200,000
Tobacco (Tons)	300	2,000	25,000
Bananas (Bunches)	Nil	1,750,000	6,000,000
Paper (Tons)	500	20,000	45,000
Woodpulp (Tons)	Nil	3,000	75,000

Some of the increases are remarkable. There was no trade in petroleum spirit in 1885; a mere 10,000 tons in 1910, but by 1935 the imports had reached half a million tons—an indication of the phenomenal advance of the internal combustion engine during His Majesty's reign.

The Port in the Great War.

The strategic position of the port naturally led to its being greatly used during the critical years of 1914-1918.

About 2,250 vessels with a registered tonnage of over 5½ millions, including vessels employed in the transport of war material, troop ships, hospital ships, as well as vessels of the Royal Navy, were accommodated. The traffic dealt with included over 300,000 horses and mules, and 50,000 motor vehicles. The port also played its part as a depot for food-stuffs and other necessities for the civilian population.

Progress at the Avonmouth Docks.

The most noteworthy developments have taken place at Avonmouth, where the large ocean docks provide the best possible facilities for the accommodation of all classes of vessels

and all kinds of merchandise. The following figures show the progress made at these docks:—

	1910	1935
Water Area of Docks	50 acres	85 acres
Land Area of Dock Estate	900 acres	1,170 acres
Length of Wharfrage	9,200 feet	14,930 ft.
Transit Sheds—Floor Space	50,300 sq. yds.	83,590 sq. yds.
Granaries—Capacity	20,000 tons	72,000 tons
Railborne Traffic	400,000 tons	1,200,000 tons
Traffic despatched by Water	350,000 tons	530,000 tons
Number of Motor Vehicles Loaded	Nil	100,000

In 1910 there were three elevators for discharging grain. There are now 13 of these elevators belonging to the Port Authority and to tenants on the Dock Estate.

A gratifying feature has been the extensive use made of Avonmouth Dock Estate for industrial purposes. There are now nine flour, grist and seed mills at the docks, compared with two in 1910. The Oil Companies in 1910 occupied less than 10 acres with their installations; the area so occupied is now nearly 70 acres, and there is storage accommodation for over 250,000 tons of petrol and oils. Local rates paid by tenants on the Dock Estate at Avonmouth amounted to £5,000 in 1910. The amount paid by them in rates last year was £30,000.

Immediately adjoining the dock boundary are the large works belonging to the National Smelting Company, Ltd., whose traffic through the docks amounts to nearly 100,000 tons per annum, comprising ores, coal and other commodities.

Works and Equipment.

The following are some of the principal works which have been carried out under unified municipal ownership:—

1885 to 1910.

AVONMOUTH DOCKS.

Dock extension and transit sheds;
Floating dry dock; granary; cold stores;
Construction of Royal Edward Dock.

CITY DOCKS.

Princes' Wharf granary;
Two tobacco warehouses;
Extension of quays; new transit sheds;
Swing bridges important river improvements.

1910 to 1935.

AVONMOUTH DOCKS.

Construction of:—

Western Arm, Royal Edward Dock, for accommodation of oil traffic.
Eastern Arm, Royal Edward Dock, with specialised accommodation for grain and general traffic.
Three silo granaries.
Cold stores.
New transit sheds.
Installation of mechanical appliances for handling grain and other traffic.
Purchase of Estate of 270 acres for industrial development in connection with the docks.

CITY DOCKS.

Reconstruction of transit sheds.
Tobacco warehouse.

PORTISHEAD DOCK.

This dock has been specially laid out for the requirements of the timber trade.

Since the opening of the Bristol Corporation Generating Station at Portishead in 1929, there has been a very large trade in coal at this dock; last year the quantity amounted to 100,000 tons. Special plant has been installed for conveying the coal from the importing vessels to the Generating Station.

The Future.

The achievements and the progress of the port during the past 25 years, notwithstanding the period of depression and the difficulties of international trade since the War, justify an optimistic outlook. It is always unwise to prophesy on matters relating to trade and commerce, but there is a feeling of quiet confidence amongst the members of the Port Authority and their officers as to the future. The docks have been equipped with modern facilities, and there is ample accommodation available to meet further increases in trade.

The port and its facilities are now well-known both at home and abroad, and a constant stream of enquiries about the port from all quarters indicates that its position as one of the leading ports is well established.

Port of Bristol



The Royal Edward Dock, showing connection by swing bridge with the Avonmouth Dock.



The Portishead Dock.

Aden Port Trust

The returns of shipping using the Port of Aden for the month of April, 1935, are as follows:—

	No.	Tonnage
Merchant Vessels over 200 tons ...	145	624,923
" " under 200 tons ...	4	648
Government Vessels ...	5	14,930
Dhows ...	119	4,123
PERIM.		
Merchant Vessels over 200 tons ...	13	42,394

TRADE OF THE PORT.

Article.	Unit	Imports		Exports	
		Quantity.	Value Rs.	Quantity.	Value Rs.
Coal ...	Tons	4,483	1,34,513	0	0
Coffee ...	Cwts.	4,756	1,42,920	5,911	2,24,276
Grain, Pulse and Flour ...	"	73,505	3,86,606	34,979	1,66,565
Gums and Resins ...	"	3,021	52,906	2,958	71,953
Hardware ...	"	0	29,457	0	36,606
Hides, raw ...	No.	2,860	3,215	8,160	13,128
Oil, Fuel ...	Tons	70,836	16,67,271	0	0
" Kerosene ...	Gls.	23,065	15,010	3,164	2,238
" Petrol ...	"	32,872	29,872	1,848	1,848
Salt ...	Tons	0	0	34,703	3,60,540
Seeds ...	Cwts.	2,289	15,076	926	6,678
Skins, raw ...	No.	296,397	1,69,189	474,416	3,81,375
Sugar ...	Cwts.	27,250	1,18,723	36,266	1,63,646
Textiles—					
Piece Goods, Grey ...	Yds.	3,564,079	4,78,079	3,008,860	3,89,775
" " White ...	"	998,384	1,50,663	206,900	31,570
" " Printed or Dyed ...	"	1,558,755	2,51,045	889,815	1,76,098
Twist and Yarn ...	Lbs.	155,582	65,710	140,553	58,170
Tobacco, Unmanufactured ...	"	336,057	38,396	510,356	97,046
" Manufactured ...	"	95,742	57,335	22,313	11,831
Other Articles ...	No. of Pkges.	54,401	11,08,645	25,695	5,59,666
Treasure, Private ...	"	0	6,74,746	0	5,50,700
Total ...	—	—	55,89,377	—	33,03,649

The number of merchant vessels over 200 tons that used the Port in April, 1935, was 145, as compared with 137 in the corresponding month last year, and the total tonnage was 625,000, as compared with 596,000.

Excluding coal, salt, fuel oil and Military and Naval Stores and transhipment cargo, the total tonnage of imports in the month was 10,200 and of exports 6,800, as compared with 10,900 and 6,000 respectively for the corresponding month last year.

private treasure; and below, in the case of coffee, grain, pulse and flour, gums and resins, seeds, raw skins, sugar and manufactured tobacco.

Exports were above those for April, 1934, in the case of coffee, hardware, raw hides, seeds, raw skins, sugar, grey, white and printed or dyed piece-goods, twist and yarn, unmanufactured tobacco and private treasure; and below, in the case of grain, pulse and flour, gums and resins and manufactured tobacco.

Lloyd's Register Shipbuilding Returns for the Quarter ended 31st March, 1935

THE statistics issued by Lloyd's Register of Shipping regarding merchant vessels under construction at the end of March last show that in Great Britain and Ireland there is a decrease of 41,019 tons in the work in hand, as compared with the figures for the previous quarter. In this connection, however, it may be remarked that the tonnage of new vessels completed during the past three months has been greater than usual, and that the present total of tonnage under construction—555,815 tons—is, nevertheless, 74,375 tons greater than the tonnage which was being built at the end of March, 1934.

The tonnage on which work was suspended at the end of March last amounted to 23,288 tons, being composed entirely of steamers.

About 67,000 tons—12 per cent. of the tonnage now being built in this country—are intended for registration abroad or for sale.

The tonnage now under construction Abroad*—713,719 tons—is about 59,000 tons more than the work which was in hand at the end of December, 1934, and is the highest quarterly total recorded since June, 1932. Tonnage, included in the total in hand abroad, on which work has been suspended amounts to 2,570 tons of steamers and 6,628 tons of motor-ships.

The leading countries abroad are:—Germany, 194,770 tons; France, 120,899 tons; Sweden, 83,213 tons; Japan, 79,491 tons; Denmark, 66,640 tons; and Holland, 60,371 tons.

The total tonnage under construction in the World* amounts to 1,269,534 tons, of which 43.8 per cent. is being built in Great Britain and Ireland, and 56.2 per cent. abroad. The World total shows an increase of about 18,000 tons over the figures at the end of December last, and is, with the exception of that for September last, the highest since March 1932.

* Excluding Russia, for which no figures are available.

In Great Britain and Ireland, 144,386 tons were commenced during the last three months, showing an increase of 50,958 tons, compared with the corresponding total for the December quarter. During the quarter ended March, 1935, 106,097 tons were launched in Great Britain and Ireland, a decrease of 100,430 tons, as compared with the previous quarter. Similar figures for abroad are 177,281 tons commenced, and 173,166 tons launched, showing, as compared with the previous quarter, an increase of 67,812 tons in the tonnage commenced, and a decrease of 4,689 tons in the tonnage launched.

Steam and motor oil tankers under construction in the world amount to 41 vessels of 313,795 tons, of which 10 vessels of 76,765 tons are being built in Germany, five vessels of 45,250 tons in Denmark, six of 45,210 tons in Holland, five of 42,700 tons in Sweden, six vessels of 36,550 tons in Great Britain and Ireland, two of 17,300 tons in Japan, and two of 16,800 tons in the United States of America.

Of the 555,815 tons under construction in Great Britain and Ireland at the end of March, 251,942 tons consisted of motor-ships, while at the same date the motor-ship tonnage being constructed abroad (464,199 tons) was 216,854 tons in excess of that of the steamers.

The vessels being built in the world at the end of March include seven steamers and 14 motor-ships of between 8,000 and 10,000 tons each; four steamers and 22 motor-ships of between 10,000 and 20,000 tons; and four steamers and two motor-ships of 20,000 tons and upwards.

The table respecting marine engines shows that the horse-power of steam engines now being built or being fitted on board amounts to about 775,000 h.p.; this figure includes 50 sets of turbine engines of about 654,000 shaft horse-power. The horse-power of the steam reciprocating engines (about 121,000 h.p.) amounts to 7.9 per cent. of the total horse-power of marine engines now being built in the world. The figures for oil engines aggregate approximately 752,000 h.p.

Recent Legal Decisions

THE Employers' Liability Act of 1880 was passed to mitigate the rigours of the common law rule that a servant had no action against his master for injury caused by the fault of a fellow servant. It enacts (Section 1) "Where personal injury is caused to a workman . . . (2) by reason of the negligence of any person in the service of the employer who has any superintendence entrusted to him whilst in the exercise of such superintendence . . . the workman . . . shall have the same right of compensation and remedies against the employer as if the workman had not been a workman or nor in the service of the employer, nor engaged in his work"; and, by Section 8, that "person who has any superintendence entrusted to him" means a person "whose sole or principal duty is that of superintendence, and who is not ordinarily engaged in manual labour."

Ronald v. Gilmartin (1935), S.L.T. 249, was an action brought under that section, concluding for payment of damages in respect of injuries received by pursuer while in the employment of the defender. The material facts of the case were as follows:—"The pursuer was a dock labourer, and, at the time of the accident, was one of a gang of workmen employed by the defender, who was a stevedore, in the work of unloading bales of paper, which were lifted by means of a derrick from the hold of a steamship on to a barrow, and were wheeled therein to the quayside. The pursuer was working in the hold, when two bales, which were being lifted by the derrick, began to swing and struck the underside of the coaming of the hatch, with the result that the bales fell and injured the pursuer. The accident was caused by the negligence of a workman named Martin Foy, also employed by the defender, who was in charge of the gang, and failed in his duty to ensure that the load carried by the derrick did not swing, and to signal to the winchman to stop the winch from raising the bales when the bales began to swing.

The pursuer maintained that Foy was a person to whom superintendence had been entrusted, and that the defender was answerable for Foy's negligence in terms of the Employers' Liability Act, 1880. The defender denied liability and maintained that Foy, even on the assumption that he had some duty of superintendence, was "ordinarily engaged in manual labour" within the meaning of Section 8 of the Act of 1880, in respect of the nature of his duties.

It appeared that Foy's duties were as follows:—He was in charge of the gang which included the pursuer and consisted of fifteen men. He engaged the men, allocated their work, dismissed them if necessary, supervised their work and gave them orders which they were bound to obey. At the end of the day's work he handed them their pay, which he had received from the defender's office. As regards the work of unloading, Foy's duty was to instruct the winchman so that loads might be lifted without swinging, and if a load did begin to swing, to signal to the winchman to stop the winch. At the time of the accident Foy was acting as hatchmouth man, and, as such, it was also his duty to see that the load was steadied and the winch stopped if necessary. Foy also, but largely in his own discretion, gave a hand to the two men in charge of the barrow, so as to guide the load towards, and arrange it upon, the barrow which was used to convey the load from the hatchmouth to the quayside. When necessary, as on the occasion in question, Foy stationed himself at the hatchmouth so as to be able to prevent, by the pressure of his hand, the load from striking the hatch coamings as it was being lifted. Foy was paid 2s. 6d. a day more than the current rate of pay of a dock labourer. He was not one of the stevedore's permanent staff, but frequently acted in charge of a gang.

The Judge of first instance dismissed the claim holding that, while the accident was due to Foy's negligence, he was not a person who had superintendence entrusted to him within the meaning of the Act of 1880. The pursuer appealed to the Court of Session, and the case was remitted in order to be heard before a Court of seven judges, which held that Foy was a person who had superintendence entrusted to him within the meaning of Sections 1 (2) and 8 of the Act of 1880, in respect that his principal duty was that of superintendence, and that, since any manual labour he performed was subsidiary to that duty, he could not be described as "ordinarily engaged in manual labour"; and that the defender was, accordingly, liable in reparation to the pursuer under the Act of 1880.

It is useful to compare the result thus reached with the previous leading cases. In *Shaffers v. The General Steam Navigation Co.* (1883), an accident occurred to a dock labourer through the fault of a hatchmouth man, part of whose duty was to guide the beam of the crane by means of a guy rope, in which duty he failed. The plaintiff was non-suited upon the ground that the man in charge of the guy rope was a fellow-servant of the plaintiff, and was not a person having superintendence entrusted to him in the sense of the Act. It was

held that the non-suit was right; the real ground of judgment being given by Mathew J. in these words: "The accident arose from his negligence in the capacity of a workman, and not of a superintendent."

Next, in the case of *Osborne v. Jackson and Todd* (1883), the plaintiff was injured through a plank which he had been directed by the foreman to hold slipping from him and knocking down a shoring near which he was working. Although the act of the foreman in handing the plank to the plaintiff was an act of manual labour, nevertheless, it was held to have been done by him in the course of his superintendence, and the case thereby was held distinguishable from the case of *Shaffers*.

Again, in the case of *Kellard v. Rooke* (1887), the plaintiff, who was injured by the fall of a bale upon him while working in the hold of a ship, was non-suited upon the ground that there was no evidence that the person whose negligence caused the accident was a person who had superintendence entrusted to him within Section 8 of the Act. On appeal, the non-suit was upheld, upon the ground that the evidence disclosed that the injury was sustained by the plaintiff through the fault of a person who at the time of the accident was in the exercise of a duty cast upon him as an ordinary workman engaged in manual labour. The ground of judgment is quite clear from what was said by Lindley, L.J., in the Court of Appeal: "It is quite clear that he was ordinarily engaged in manual labour, although he may have had some superintendence entrusted to him."

In *Ronald v. Gilmartin* the converse applies, viz.: that Foy was ordinarily engaged in superintendence, although he may have had some manual labour entrusted to him.

These cases show that the question has been regarded as largely one depending upon the relative amounts of the superintendence and the manual labour. Or, as Lord Hunter put it in *Ronald v. Gilmartin*, "The definition clause must be construed in a broad and general sense. If the work in which a man is engaged at the time is solely, or principally, that of superintendence, I do not think that the employer can escape liability by establishing that incidentally, or ancillary to the duty of superintendence, some manual labour has to be done. To hold that an employer of labour could get rid of his statutory liability for the negligence of someone entrusted with superintendence by simply assigning to that person some slight manual work, would have the effect of rendering the main provisions of the Act ineffective.

Finally, we may usefully refer in this connection to the observations made by Lord Sumner in his speech in *Jaques v. Steam Tug "Alexandra"* (1921). In that case it was laid down, according to the rubric, that "In considering whether an employee is 'employed otherwise than by way of manual labour' within Section 13 of the Workmen's Compensation Act, 1906, the test is the substantial nature of the employment regarded as a whole. If it be manual labour, the fact that the employment involves duties which are not manual labour does not exclude the employee from the benefit of the Act; if it be not manual labour, the fact that the employment necessitates some amount of manual labour does not bring him within the Act." In discussing the proper test to be applied, Lord Sumner said: "The cases which were cited were, for the most part, decisions on the Employers' Liability Act. Even on the words 'engaged in' the Courts have almost uniformly looked to the real and substantial work to be done, to the main duty of the employee and the general nature of his employment, to that which is primary and substantial in his operations and not to that which is merely incidental and accessory." In short, the test to be applied is a broad one, so that the real intent of the statute should not be defeated by a too literal or rigid construction.

Port of Halifax, Nova Scotia: Annual Report for 1934.

The Halifax Harbour Commissioners report satisfactory progress last year, cargo tonnage having exceeded 2,000,000 for the first time on record.

The number of vessels handled at the Commissioners' piers during the year was 3,321, with a net tonnage of 7,919,615, as compared with 2,763 vessels with a tonnage of 7,087,320 in 1933. The total cargo tonnage for the entire port was 2,036,265, a gain of 19.7 per cent.

Receipts and shipments of grain aggregated 5,924,761 bushels, and deliveries from the grain elevator 2,517,046 bushels.

Cargo tonnage handled at the Port of Halifax on the Canadian Atlantic sea coast for the first quarter of 1935 totalled 711,493 tons, a new high all-time record. This compares, as follows, with tonnage handled for the same period in the last three years: 1934,—680,506 tons; 1933,—425,651 tons; and 1932,—441,071 tons.

News from all Quarters

South Africa

FEARS that in spite of promises made by the Minister of Railways and Harbours the new deep-water quay for Cape Town cannot be completed in time for the arrival of the first of the Union Castle Line's new ships were expressed, recently, by a prominent Cape Town expert.

"I cannot imagine, and authorities whom I have consulted are in agreement with me, how the quay can be built and equipped by the time the first ship arrives," he said. "The Union Castle Company has stated that the first ship will be here in the first week of February, 1936. That allows less than nine months for the work. All that has been done so far is the dredging of the first part of the trench for the foundations. There still remains a wall fifty to sixty feet high, many feet thick and nine hundred feet long to be built, and when that is done the filling-in of the three hundred feet between the new wall and the present mole with rubble—an operation which the experience on the foreshore reclamation scheme has shown will take many months. Then the whole surface has to be treated, up-to-date sheds constructed, railway lines laid and cranes erected. If Mr. Pirow and his men can do all this in nine months, they must be remarkable people."

Meanwhile, figures released by the Harbours' Administration emphasise how Table Bay Harbour is being left behind by the other Union ports, and particularly by Durban. The figures refer to the cargo handled at Union ports in March, 1935. Every port, with the exception of Walvis Bay, shows an improvement in the amount of cargo handled over March, 1934. Table Bay shows the one but smallest improvement, of only 16 per cent., as against Durban's 30 per cent. East London's improvement was approximately 26 per cent., and Mossel Bay's 34 per cent. Port Elizabeth handled about 13 per cent. more cargo, and Walvis Bay showed a decrease of about 15 per cent.

Table Bay also showed the one but smallest improvement in the number of vessels entering, without taking Walvis Bay into account. The improvement at Table Bay was 18 per cent., against 28 per cent. at Durban and 58 per cent. at East London. The number of ships calling at Port Elizabeth increased by 33 per cent., Mossel Bay's improvement being 12 per cent. Walvis Bay continued, as in the past, to show a very heavy falling-off in the number of ships visiting the port. Only six ships were handled there, as compared with 23 during March, 1934, constituting a drop of 74 per cent.

U.S.A.

After showing an improvement over the December, 1934, figure in January, 1935, the in and out-going traffic of the harbour of New York fell again considerably in February, but made a surprising recovery in March, when the highest point since September, 1934, was reached. The following table gives the exact figures for the first quarter of the current year:

	JANUARY		FEBRUARY		MARCH	
	No. of Ships	Tonnage in R.T.	No. of Ships	Tonnage in R.T.	No. of Ships	Tonnage in R.T.
Incoming ...	412	2,069,982	368	1,846,003	424	2,151,900
Outgoing ...	452	2,165,062	396	1,945,177	469	3,279,712

It has recently been pointed out that the decline in the traffic of the harbour of New York during the past few years has been due not only to the reduction in foreign trade, but to the fact that other harbour towns along the Atlantic seaboard have succeeded in diverting part of it to themselves. Philadelphia, Boston, Baltimore, Charleston, and New Orleans harbours have been particularly successful in this respect. Moreover, the high rates and taxes of New York, and difficulties in the supply of adequate labour have caused many manufacturers during the past two years to transfer their works to other harbour towns, for the most part further to the south. Shipments to and from these factories formerly constituted an important part of the traffic.

In view of these facts, the municipal and harbour authorities are planning to co-operate in plans for the provision of additional landing and storage facilities in the Port of New York, which will induce some of the lost traffic to return.

Brazil

The number of ships entering the harbour of Santos during the year 1934 was 2,868 with a tonnage of 10,210,000 b.r.t., and the number clearing during the same period was 2,845, with 10,176,000 b.r.t.

The in-going traffic during the months of January-March, 1935, amounted to 627 vessels with a tonnage of about 2,300,000 b.r.t., and the out-going traffic to 614 vessels with 2,200,000 b.r.t.

Hong Kong

The total sea-going traffic of the harbour of Hong Kong showed in the first quarter of the current year an improvement over that of the last quarter of 1934. The incoming traffic amounted during the above periods to 5,586 vessels with a tonnage of about 5,000,000 r.t., as against 5,166 vessels with 4,900,000 r.t. The out-going traffic amounted to 5,822 vessels with 5,000,000 r.t., as compared with 5,279 vessels with 4,900,000 r.t.

China

Plans have recently been made by the Ministry of Industry for the construction, at considerable cost, of two complete new fishery harbours. The first of these will be situated near Chengshan on the Island of Tsungming in the mouth of the Yangtze River, and the second near Shihtaoshan in Tengkhsien on the Shantung coast.

Netherlands East Indies

Although the tonnage exported over the harbour of Tandjong-Priok in Batavia was favourably influenced in 1934 by the improvement in the tea market, the corresponding improvement in the purchasing power of the inhabitants of the hinterland was insufficient to cause a larger tonnage of imports. The following table gives the tonnage handled in the harbour in the past three years:—

	Imports	Exports	Total
1932 ...	329,000	237,000	566,000
1933 ...	334,000	223,000	557,000
1934 ...	306,364	236,695	543,059

The value of imports fell from 77,400,000 Gulden in 1933 to 70,600,000 Gulden in 1934, whilst that of exports rose from 55,900,000 Gulden in 1933 to 108,100,000 Gulden in 1934.

The harbour of Tandjong-Priok plays an important part in the goods traffic with the other islands of the Netherlands East Indies, and it is believed that this traffic amounted to about 325,000 tons in 1934.

The ocean-going and inter-island traffic developed during the past three years in the following manner:—

	No. of Ships	Volume in Cubic Metres
1932 ...	2,249	24,920,000
1933 ...	2,200	25,015,000
1934 ...	2,166	25,593,000

Vessels with less than 300 cu. metres are not reckoned in the above table. The following tables give a survey of the development of the traffic in the harbour since the year 1924:—

	STEAM VESSELS:		Gross Tonnage in cu. metres
	No. of Ships	Net Tonnage in cu. metres	
1924	2,037	12,608,000	—
1925	2,002	12,611,000	—
1926	2,065	13,179,000	—
1927	2,156	13,475,000	—
1928	2,310	14,911,000	—
1929	2,504	16,291,000	—
1930	2,275	14,253,000	23,668,000
1931	1,859	11,230,000	18,821,000
1932	1,593	8,743,000	14,778,000
1933	1,492	8,636,000	14,612,000
1934	1,459	8,646,000	14,620,000

	MOTOR VESSELS:		
	No. of Ships	Net Tonnage in cu. metres	
1924	135	607	—
1925	222	1,025	—
1926	286	1,703	—
1927	333	2,147	—
1928	426	3,179	—
1929	557	3,959	—
1930	660	4,902	8,063
1931	729	6,116	10,158
1932	726	6,159	10,247
1933	790	6,356	10,516
1934	707	6,610	10,973

Denmark

In the year 1934, the number of sea-going steam and motor vessels entering the harbour of Aarhus was 883 with a tonnage of about 712,000 n.r.t. and a cargo of 859,000 tons. The number clearing was 781 with a tonnage of 532,000 n.r.t. and a cargo of 95,000 tons. Altogether, the number of ships entering showed a decline of 3.84 per cent. from that of 1933, whilst the tonnage fell by 1.96 per cent., and the goods turnover by .74 per cent. In sea-going and coastal traffic, 2,111 steam and motor vessels entered the harbour during the year 1934 with almost 1,300,000 n.r.t.

*News from all Quarters—continued**Poland*

The goods turnover in sea-going traffic in the harbour of Gdingen, which had already declined in April by 125,000 tons to 589,000 tons, fell in May by a further 28,000 tons to 561,000 tons, in spite of the number of working days in May having been two more than in April. The export turnover decreased by 16,000 tons to 477,000 tons, and the import turnover by 12,000 tons to 84,000 tons. As had been the case in April, the goods turnover was again below that for the corresponding month of the previous year, this time by no less than 56,000 tons. The decline in Polish foreign trade still shows no sign of ceasing.

Danzig

The traffic in the harbour of Danzig showed in May an improvement over the April figures. The in-coming traffic increased by 31 vessels, or 39,620 n.r.t., and the out-going traffic by 4 vessels, or 26,685 n.r.t. Nevertheless, the traffic figures for May, 1935, were considerably behind those for May, 1934—by 16 vessels, or 3,751 n.r.t. in the case of in-coming traffic, and by 38 vessels, or 23,036 n.r.t. in that of out-going traffic. The in-coming traffic for the first five months of 1935 was less than that for the corresponding period of 1934

by 208 vessels, or 128,658 n.r.t., and the out-going traffic was less by 209 vessels, or 115,806 n.r.t.

Sea-going traffic of the harbour of Danzig:—

	ENTERING		CLEARING	
	No. of Ships	N.R.T.	No. of Ships	N.R.T.
May 1935 ...	363	247,857	357	243,062
April 1935 ...	332	208,237	353	222,367
May 1934 ...	379	251,608	395	272,088
Jan.-May 1935 ...	1,675	1,110,928	1,689	1,135,447
Jan.-May 1934 ...	1,883	1,239,586	1,898	1,251,253

Although the total imports for the month of May, 1935, amounted to 72,514, as compared with 46,257 tons in May, 1934, the total exports fell by a good third, from 508,777 tons to 356,369 tons.

Jugoslavia

The traffic in the harbour of Susak in the year 1934 showed a certain improvement over that of 1933. The total imports rose from 159,932 tons in 1933 to 165,216 tons in 1934, and exports from 341,954 tons in 1933 to 410,526 tons in 1934. The tonnage of the transit traffic handled remained on almost the same level as in the previous year, standing at 23,048 tons instead of 23,822 tons.

*The Port of Colombo**Dredging.*

DURING the month of April, 1935, the dredger "Sir William Matthews" was engaged in dredging alongside the S.W. Breakwater in Berth No. 5 and a portion of Berth No. 4.

A total quantity of 20,800 cub. yds. of dredged material, consisting mainly of fine silt, mud and sand, was removed and deposited at sea during the month.

Vessels passing through the Lake to Harbour Canal.

The number of lighters, motor launches, steam launches, jolly boats, barges and punts, sailing boats, water boats, and rafts which passed through the Lake to Harbour Canal in April, 1935, was 600, compared with 871 in April, 1934. The total number of vessels which passed through the Lake to Harbour Canal in the first four months of 1935 was 2,491, as compared with 3,556 for the corresponding period of 1934.

Traffic through the Lake to Harbour Canal.

The goods traffic through the Lake to Harbour Canal during April, 1935, amounted to 1,669 tons of imports and 3,490 tons of exports, as compared with 5,868 tons of imports and 5,588 tons of exports in April, 1934. For the first four months of 1935, 4,209 tons of imports and 15,695 tons of exports passed through the Lake to Harbour Canal, as compared with 9,967 tons of imports and 25,060 tons of exports for the corresponding period of 1934.

Liquid Fuel Imports.

The quantity of liquid fuel imports at Colombo during April, 1935, amounted to 18,259 tons, as compared with 29,954 tons in April, 1934. During the first four months of 1935, 108,126 tons of liquid fuel were imported, as compared with 100,939 tons for the corresponding period of 1934.

Liquid Fuel Bunkers supplied to Steamers.

The quantity of liquid fuel bunkers supplied to steamers in April, 1935, was 43 ships bunkered with 19,435 tons of liquid fuel, as compared with 47 ships with 21,561 tons in April, 1934. For the first four months of 1935, 173 ships were bunkered with 91,763 tons of liquid fuel, as against 168 ships with 90,790 tons for the corresponding period of 1934.

Coal Imports.

The quantity of coal imported during the month of April, 1935, was 19,785 tons, as compared with 30,829 tons in April, 1934. A total of 130,134 tons of coal was imported for the first four months of 1935, as against 124,176 tons in the corresponding period of 1934.

Coal Bunkers supplied to Steamers.

The number of steamers bunkered during April, 1935, was 87, which took on a total of 24,788 tons of coal, as compared with 67 steamers with 18,785 tons of coal in April, 1934. For

the first four months of 1935, 299 steamers were bunkered with 84,468 tons of coal as compared with 274 steamers with 72,932 tons in the corresponding period of 1934.

Number and Tonnage of Vessels Entered and Cleared.

Number and tonnage of vessels other than country craft engaged in trade which entered and cleared at this port during the periods specified:—

(a) ENTERED	Vessels engaged in Foreign Trade		Vessels engaged in Coasting Trade	
	Number	Tons	Number	Tons
During April, 1935 ...	240	1,086,064	4	9,303
During April, 1934 ...	221	989,154	3	8,019
During April, 1933 ...	202	913,697	—	—
During the four months ended April, 1935 ...	911	4,166,618	13	34,849
During the four months ended April, 1934 ...	882	4,067,408	16	47,459
During the four months ended April, 1933 ...	848	3,826,792	—	—

(b) CLEARED	Vessels engaged in Foreign Trade		Vessels engaged in Coasting Trade	
	Number	Tons	Number	Tons
During April, 1935 ...	244	1,090,637	1	4,059
During April, 1934 ...	222	993,084	3	11,065
During April, 1933 ...	202	918,678	2	8,079
During the four months ended April, 1935 ...	918	4,178,451	6	22,226
During the four months ended April, 1934 ...	891	4,086,528	12	43,018
During the four months ended April, 1933 ...	845	3,823,321	5	16,840

Tonnage of Imports and Exports.

Tonnage of imports and exports of this port during the periods specified:—

	During April		1935
	1933	1934	
Imports (excluding Coal and Oil) ...	62,495	73,035	67,409
Exports ...	46,641	62,627	37,524
Total ...	109,136	135,662	104,933

	During the four months ended April		
	1933	1934	1935
Imports (excluding Coal and Oil) ...	273,748	338,475	339,103
Exports ...	177,056	231,555	174,186
Total ...	450,804	570,030	513,289

Oil Facilities Receipts.

The oil facilities receipts for April, 1935, were Rs. 113,221, as compared with Rs. 78,323 during April, 1934. The total receipts for the first four months of 1935 amounted to Rs. 394,481, as compared with Rs. 345,261 for the corresponding period of 1934.

Clyde Navigation Trust

Developing Empire Trade.

At the joint meeting of the Clyde Navigation Trust, presided over by Mr. W. F. Robertson, chairman, the annual report of the commercial manager, Mr. Harold M. Ford, on the development of overseas trade with the Port of Glasgow during the past year was submitted.

In the report Mr. Ford stated that despite many difficulties further progress had been made in the development of trade to and from the Clyde with those countries with whose trade his department was concerned. Increases in both shipping and tonnage of goods had resulted during the past year in the homeward trade from Australia, New Zealand and South Africa. From these three countries 118 vessels sailed to the Clyde, representing an in and out tonnage of 1,128,124 tons of shipping, bringing cargoes totalling 234,608 tons, representing an increase of 10 vessels and increased imports of 13,144 tons over 1933.

On the export side 117 vessels loaded out to these three countries, carrying 166,470 tons of cargo—an increase of 16 vessels and 51,418 tons of cargo compared with the previous year.

Commenting on the Australian development, Mr. Ford points out that the most important feature was reflected in the development which has taken place in products requiring refrigerated ships, such as meat, dairy produce, eggs, fruit, etc., which not only contribute the highest rated dues to the Trust, but also necessitate the employment of refrigerated tonnage, bringing ships of the largest type to the Clyde. When comparison is made with only 12 such vessels in 1927 trading to the Clyde, bringing only 900 tons of refrigerated cargo, as compared with 30 refrigerated vessels last year, bringing 12,000 tons of such cargoes, the value of developing these trades is apparent. In 1927 the total number of ships, all classes, from Australia was only 22.

Further additional shipping has been tentatively arranged between Australian ports and Glasgow for the first half of 1935, whereby eight additional refrigerated boats are scheduled for this port, making a probable 25 against 17 in the corresponding six months of last year. The revenue derived from this inward trade for the year totalled £24,351.

The number of vessels received from New Zealand last year constituted a record, there being 33, representing an in and out tonnage of 389,484 n.r.t.—an increase of 4 vessels over 1933, bringing 38,546 tons of goods, only 240 tons less than the total cargoes of the previous year. The whole of this shipping and practically the whole of the cargoes concerned are refrigerated. The introduction of voluntary quotas on New Zealand meat—in agreement between the British and New Zealand Governments—undoubtedly reacted adversely to the progress of trade between New Zealand and Scotland. In addition, there was a serious falling off in production of New Zealand dairy produce, and it is estimated that these two factors combined represented an approximate loss of some 6 vessels and possibly 56,000 tons of goods to the Port.

With regard to export trade, there was a welcome increase in export cargoes from the Clyde to New Zealand of nearly 10,000 tons. As with Australia, New Zealand has also made concessions to British trade in her tariffs. Given a return to increased prices for her commodities in our markets, which are happily showing some improvement, and possibly still further tariff concessions, there are indications that our export trade from the Clyde to New Zealand will continue to improve. As with Australia, steps are being taken to open up new

agencies for Scottish manufacturers wherever possible with this end in view.

Dealing with the trade of these two countries, the report contains a statement showing the progress which has been made since 1927 when the Trustees first took suitable steps to develop trade with the overseas Dominions. In that year only 22 vessels sailed to the Clyde with 46,000 tons of goods from Australia. Last year the number of vessels was 50, bringing 132,000 tons of goods. In 1927 there were only 15 vessels sailing from New Zealand, bringing 15,000 tons of goods. In 1934, 33 vessels brought 38,500 tons.

The most important development in trade with which the department was concerned last year was undoubtedly in connection with South African fruit. This trade, which has developed enormously in the last 15 years, has in the past been almost entirely concentrated upon Southampton with London as the marketing centre. South Africa is shipping to this country approximately two-and-a-half million cases of citrus fruit and three-and-a-half million packages of deciduous fruits, which hitherto were discharged at Southampton by the Union Castle Mail boats and distributed from there. After four years of continuous effort, aided by the High Commissioner for South Africa, an itinerary was for the first time last year arranged whereby 9 refrigerated vessels brought supplies of South African fruit direct to Glasgow, the cargoes of these vessels totalling 8,512 tons, bringing an additional revenue of approximately £3,000 to the Trust.

On the general homeward trade with South Africa, there was an increase of 10 vessels and 10,954 tons of cargo. This increase is accounted for by the new fruit imports and by increased shipments of maize, which had fallen off considerably in 1933 and the first part of 1934 due to drought conditions.

On the export side, South Africa continues to be one of our best customers. In 1933, 64 vessels loaded out, carrying 61,710 tons of cargo. Last year 78 vessels loaded out—an increase of 14, carrying 95,489 tons of cargo—an increase of 33,779 tons.

Kelvinhaugh Wharf.

At the same meeting it was reported that at the joint meeting of the New Works and Harbour Committees it was decided to recommend the Trustees to approve of the scheme for the improvement of Kelvinhaugh Wharf and proceed with the work. The plans prepared by the engineer of the Trust provide for the reduction of the length of the wharf to 125 feet from its easternmost end and for the strengthening of the portion retained, at an estimated cost of £28,000.

New Catalogues.

The Renold & Coventry Chain Co., Ltd., Renold Works, Didsbury, Manchester, have just published a revised catalogue on Renold chains for conveyors and elevators. The catalogue is exceedingly well produced and illustrated and its chief features are: (1) The division of the catalogue into sections dealing with particular types of conveyors and elevators, (2) the very complete technical information available for designing conveyor installations, (3) the augmentation of the range of standardised attachments, (4) A UNIQUE FEATURE IN CONVEYOR PRACTICE—a selection chart to enable rapid determination of strength of chain required for any type of application, (5) complete wheel information in regard to diameters and tooth forms.

The principal aim of this new catalogue is to make accessible the complete information to assist in the preparation of detailed conveyor schemes, and the inclusion of a separate price supplement enables detailed estimates to be got out with a minimum of trouble.

This very useful catalogue, which is known as No. 120 03, can be obtained by any of our readers who are interested, on application to the Renold & Coventry Chain Co., Ltd., and mentioning this journal.

A very useful publication has just been issued by Messrs. Stothert & Pitt, Ltd., of Bath, concerning their steam and internal combustion engine cranes. The publication is very well illustrated and gives descriptions of various cranes which have been supplied by this firm to different parts of the world.

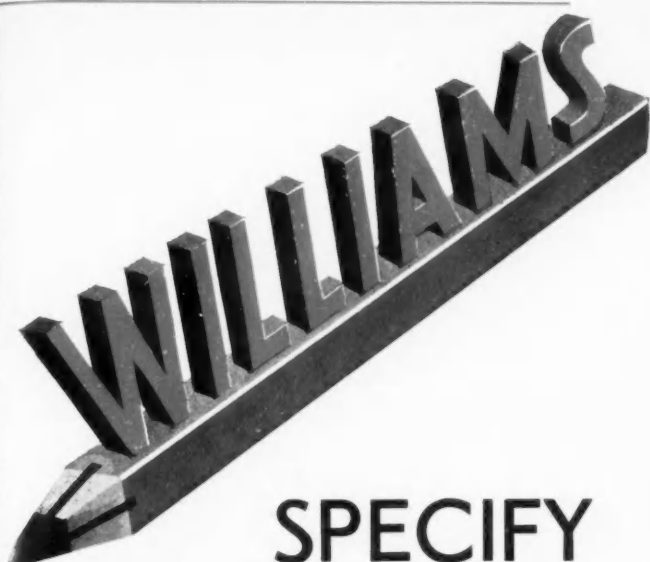
This catalogue illustrates floating cranes, steam dredging cranes, steam grabbing cranes, special steam cranes, portable steam cranes, shunting cranes, breakdown cranes, caterpillar cranes (steam and Diesel), magnet cranes, locomotive steam cranes, etc., etc.

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Irish Harbour Matters

Claim by Dublin Port and Docks Board.

IN the Four Courts, Dublin, Mr. Justice Johnston heard an action by the Dublin Port and Docks Board, claiming £1,312 9s. 5d. alleged to be due on coal imported by the Electricity Supply Board between 6th December, 1931, and the 30th September, 1934. During that period 110,489 tons of coal were imported by the defendants and discharged at the Pigeon House Harbour, and the plaintiffs claimed that they were entitled to be paid dues on all vessels and cargoes using the harbour.

The defence was that the coal was unshipped in the Pigeon House Harbour, which was not within the rates limit of the plaintiffs, and a plea that the plaintiffs were not entitled to levy dues on cargoes or vessels entering the harbour.

It was further pleaded by the defendants that by an Act of 1929, the Dublin Corporation, the predecessors of the defendants in the ownership of the Pigeon House power station and harbour, was exempt from the payment of dues, and that therefore this privilege passed to the defendants when they acquired the property.

Mr. FitzGibbon, K.C., Mr. Michael Benchy, K.C., and Mr. Denis Johnston (instructed by Messrs. D. and F. Fitzgerald) appeared for the plaintiffs; and Mr. H. J. Moloney, K.C., Mr. Lavery, K.C., and Mr. Marnan (instructed by Messrs. Cox and Co.) for the defendants.

Mr. Benchy, arguing that the plaintiffs were entitled to levy the dues, said that the Alliance and Dublin Gas Company, which imported coal by its own ships, had to pay dues to the Dublin Port and Docks Board. If the Court found for the defendants, the effect would be to retain the privilege of exemption to the Corporation and confer the exemption on a wholly different body.

Judgment was reserved.

Work of Limerick Harbour Board.

The annual report of Limerick Harbour Board for the year 1934, prepared by the Secretary, Mr. D. McNiece, and adopted at the Board's annual meeting, states that imports showed an increase of 36,000 tons, as compared with 1933, while exports decreased by 3,000 tons. Revenue from all sources was £22,837, an increase of £1,423, compared with 1933. Receipts from interest and investments decreased by £1,500, the amount received from that source during the year being £2,143, leaving the total income of the Board, inclusive of sundry receipts, at £27,219, an increase of £28 over 1933. Expenditure showed an increase, and amounted to £17,582, leaving the net surplus on the year's trading at £9,637.

The expenditure on the dock extension scheme to the end of 1934 amounted to £71,379.

The Secretary added that the Board had power to borrow up to £200,000, and the position with regard to shipping had improved since last meeting, when the adverse balance was £2,900 for the first four months of the present year. That had now been reduced to £2,600. Although the Board was in a position to meet its financial obligations, they should at the same time anticipate a decline in revenue at the end of the year.

Cattle shipments from the port during the year under review, totalled 4,281 head, a reduction of 2,944, compared with the previous year.

The report was adopted without discussion.

A resolution from the Limerick Development Association, urging the need for constructing a line of railway to connect the dock with the Great Southern System, as the absence of that link militated against the industrial development of the city, was referred to the Port Development Committee.

Cork Harbour Board Finances.

Economy recommendations adopted on 29th May by the Cork Harbour Board, include reductions in salaries, wages and pensions, while non-established workmen are to be employed on alternate weeks. The total saving estimated as a result of these economies amounts to over £6,000 per annum.

The Economy Committee set up by the Board to deal with the situation created by the deficiency of £3,461 in the revenue account for the first four months of the current year, submitted many recommendations, including the following:—

That the salaries of all officials be reduced by 7½ per cent.; that all persons of £1 per week and over be reduced by 5 per cent.; that when the Widows and Orphans Pensions Bill become law, the pension list be again reviewed; that the plant be closed down on Saturdays, and the working week reduced to 42½ hours resulting in an estimated saving of £2,547; and that non-established workmen, except those on the dredging

plant, work alternate weeks, which would save approximately £2,316. Total estimated saving—£6,010 per annum.

The Chairman, Mr. J. C. Rohan, moved, and Mr. Sinnott seconded the adoption of the report and the recommendations.

Mr. Wallace said it was the policy of the Government that was responsible for the decline in the dues, and therefore the Government should support their non-established workers in the weeks when they would not be employed.

Alderman S. French (Lord Mayor) said they had been assured that these men would be entitled to unemployment benefit.

By ten votes to eight, the meeting adopted an amendment by Mr. Wallace that the cuts in pensions be 5 per cent. up to £100 a year, 10 per cent. between £100 and £200; and 20 per cent. over £200 a year.

The Lord Mayor protested, and threatened to withdraw his signature from the Economy Committee's report.

The Chairman eventually declared the report and the recommendations adopted, with the exception of the amendment regarding the pension reductions.

The Port of Amsterdam

Statistics for the Port of Amsterdam in regard to number of vessels and tonnage and to goods traffic arrived and sailed, as compared with corresponding figures of last year, are as follows:—

SEAGOING VESSELS AND TONNAGE.

		ARRIVALS				SAILINGS			
		No.	Per Cent.	N.R.T.	Per Cent.	No.	Per Cent.	N.R.T.	Per Cent.
April 1934	...	257		412,007		238		379,969	
" 1935	...	232		342,071		224		331,369	
		-25	-9.73	-69,936	-16.97	-14	-5.88	-48,600	-12.79
Mar. 1935	...	261		389,097		262		383,958	
April 1935	...	232		342,071		224		331,369	
		-29	-11.11	-47,026	-12.09	-38	-14.50	-52,589	-13.70
Jan.-Apr. 1934	1,042			1,565,658		1,045		1,555,832	
" 1935	971			1,495,183		967		1,480,237	
		-71	-6.81	-70,475	-4.50	-78	-7.46	-75,595	-4.86

SEAGOING GOODS TRAFFIC.

(In Tons of 1000 Kilos*.)

		1 Import	2 Transit incl. in col. 1	3 Export	4 Transit incl. in col. 3	5 Total col. 1 & 3
Mar. 1934	...	319,904	73,443	144,494	68,893	464,398
" 1935	...	279,555	57,906	158,439	67,169	437,994
		-40,349	-15,537	+13,945	-1,724	-26,404
		-12.61%	-21.16%	+9.65%	-2.50%	-5.69%
Feb. 1935	...	292,923	62,436	137,709	56,711	430,632
Mar. 1935	...	279,555	57,906	158,439	67,169	437,994
		-13,368	-4,530	+20,730	+10,458	+7,362
		-4.56%	-7.26%	+15.05%	+18.44%	+1.71%
Jan.-Mar. 1934	...	935,449	181,617	417,828	156,213	1,353,277
" 1935	...	871,800	194,630	457,703	193,193	1,329,503
		-63,649	+13,013	+39,875	+36,980	-23,774
		-6.80%	+7.17%	+9.54%	+23.67%	-1.76%

* These figures have been taken from the monthly statistics of the Central Bureau, The Hague, Holland.

Classified according to flag the number of vessels which entered the Port of Amsterdam during April, 1935, was:—Netherlands, 123; Great Britain, 51; German, 17; Swedish, 17; Norwegian, 9; Danish, 2; American, 1; French, 2; Spanish, 1; Finnish, 3; Polish, 2; Estonian, 1; Belgian, 1; Jugo-Slavian, 1; Portuguese, 1.

Vessels laid-up at Amsterdam:—1st April, 1935—15 vessels, measuring 109,022 tons gross; 1st May, 1934—17 vessels, measuring 75,134 tons gross; 1st May, 1935—13 vessels, measuring 86,978 tons gross.